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=> file biosis caba caplus embase lifesci medline scisearch
=> e mollenhauer jan/au
E1          18     MOLLENHAUER J A/AU
E2           2     MOLLENHAUER J DR/AU
E3         156 --> MOLLENHAUER JAN/AU
E4           4     MOLLENHAUER JAN DR/AU
E5           2     MOLLENHAUER JOCHEN/AU
E6           1     MOLLENHAUER JUEGEN/AU
E7          62     MOLLENHAUER JUERGEN/AU
E8          39     MOLLENHAUER JUERGEN A/AU
E9           1     MOLLENHAUER JUERGEN A DR/AU
E10         25     MOLLENHAUER JURGEN/AU
E11          2     MOLLENHAUER JURGEN A/AU
E12          1     MOLLENHAUER JURGEN DR/AU

=> s e1-e4 and Dmbt?
L1         118 ("MOLLENHAUER J A"/AU OR "MOLLENHAUER J DR"/AU OR "MOLLENHAUER
               JAN"/AU OR "MOLLENHAUER JAN DR"/AU) AND DMBT?

=> dup rem l1
PROCESSING COMPLETED FOR L1
L2          41 DUP REM L1 (77 DUPLICATES REMOVED)

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 41 ANSWERS - CONTINUE? Y/(N):y

L2   ANSWER 1 OF 41  CAPLUS  COPYRIGHT 2009 ACS on STN DUPLICATE 1
AN   2009:402136  CAPLUS <<LOGINID::20090423>>
DN   150:327861
TI    ***DMBT1***   functions as pattern-recognition molecule for
     poly-sulfated and poly-phosphorylated ligands
AU   End, Caroline; Bikker, Floris; Renner, Marcus; Bergmann, Gaby; Lyer,
     Stefan; Blaich, Stephanie; Hudler, Melanie; Helmke, Burkhard; Gassler,
     Nikolaus; Autschbach, Frank; Ligtenberg, Antoon J. M.; Benner, Axel;
     Holmskov, Uffe; Schirmacher, Peter; Nieuw Amerongen, Arie V.; Rosenstiel,
     Philip; Sina, Christian; Franke, Andre; Hafner, Mathias; Kioschis, Petra;
     Schreiber, Stefan; Poustka, Annemarie;   ***Mollenhauer, Jan***
CS   Division of Molecular Genome Analysis, German Cancer Research Center,
     Heidelberg, Germany
SO   European Journal of Immunology (2009), 39(3), 833-842
     CODEN: EJIMAF; ISSN: 0014-2980
PB   Wiley-VCH Verlag GmbH & Co. KGaA
DT   Journal
LA   English
AB   Deleted in malignant brain tumors 1 (  ***DMBT1***  ) is a secreted
     glycoprotein displaying a broad bacterial-binding spectrum.  Recent
     functional and genetic studies linked   ***DMBT1***   to the suppression
     of LPS-induced TLR4-mediated NF-.kappa.B activation and to the
     pathogenesis of Crohn's disease.  Here, the authors aimed at unraveling
     the mol. basis of its function in mucosal protection and of its broad
     pathogen-binding specificity.  The authors report that   ***DMBT1***
     directly interacts with dextran sulfate sodium (DSS) and carrageenan, a
     structurally similar sulfated polysaccharide, which is used as a
     texturizer and thickener in human dietary products.  However, binding of
      ***DMBT1***   does not reduce the cytotoxic effects of these agents to
     intestinal/epithelial cells in vitro.  DSS and carrageenan compete for
      ***DMBT1***   -mediated bacterial aggregation via interaction with its
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bacterial-recognition motif. Competition and ELISA studies identify
poly-sulfated and poly-phosphorylated structures as ligands for this
recognition motif, such as heparan sulfate, LPS, and lipoteichoic acid.
Dose-response studies in   ***Dmbt1***   -/- and   ***Dmbt1***   +/+ mice
utilizing the DSS-induced colitis model demonstrate a differential
response only to low but not to high DSS doses. The authors propose that
   DMBT1   functions as pattern-recognition mol. for poly-sulfated and
poly-phosphorylated ligands providing a mol. basis for its broad
bacterial-binding specificity and its inhibitory effects on LPS-induced
TLR4-mediated NF-.kappa.B activation.

L2   ANSWER 2 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 2
AN   2009:132171 BIOSIS <<LOGINID::20090423>>
DN   PREV200900132171
TI   ***DMBT1***   expression distinguishes anorectal from cutaneous
      melanoma.
AU   Helmke, Burkhard Maria [Reprint Author]; Renner, Marcus; Poustka,
      Annemarie; Schirmacher, Peter;   ***Mollenhauer, Jan*** ; Kern, Michael
      Andre
CS   Univ Heidelberg, Inst Pathol, Neuenheimer Feld 220-221, D-69120
      Heidelberg, Germany
      burkhard.helmke@elbekliniken.de
SO   Histopathology (Oxford), (JAN 2009) Vol. 54, No. 2, pp. 233-240.
      ISSN: 0309-0167.
DT   Article
LA   English
ED   Entered STN: 18 Feb 2009
      Last Updated on STN: 25 Feb 2009
AB   Anorectal melanoma (AM) forms a rare but highly malignant subset of
      mucosal melanoma with an extremely poor prognosis. Although AMs display
      histological and immunohistochemical features very similar to cutaneous
      melanoma (CM), no association exists either with exposure to ultraviolet
      light or with melanocytic naevi. While AMs are clearly distinguished from
      CM by displaying few BRAF mutations, they are commonly indistinguishable
      from CM at the level of gene expression. The aim was to carry out
      expression analyses of classical immunohistochemical markers and of the
      protein deleted in malignant brain tumours 1 (***DMBT1***) in cases of
      primary anorectal malignant melanoma and CM.Expression analyses of
      classical immunohistochemical markers (S100, HMB45, Melan A and MiTF) and
      of the protein   ***DMBT1***   were carried out in 27 cases of primary
      anorectal malignant melanoma and 26 cases of CM. All AM cases analysed
      showed expression of at least three of the classical markers for melanoma.
      However, immunohistochemistry showed 19 out of 27 AM to be positive for
      DMBT1 , which represented a statistically significant difference
(P
      = 0.0009) compared with CM (six out of 26), which more commonly are
      negative for   ***DMBT1***   expression.These results identify
      DMBT1   as a molecular feature that may allow distinction between
AM
      and CM and support the notion that AM represents an entity molecularly
      distinct from CM.

L2   ANSWER 3 OF 41 CAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 3
AN   2008:1435519 CAPLUS <<LOGINID::20090423>>
TI   Application of a global proteomic approach to archival precursor lesions:
      deleted in malignant brain tumors 1 and tissue transglutaminase 2 are

upregulated in pancreatic cancer precursors
AU   Wang, Cheung; Darfler, Marlene M.; Alvarez, Hector; Hood, Brian L.;
     Conrads, Thomas P.; Habbe, Nils; Krizman, David B.;   ***Mollenhauer,***
   ***   Jan***   ; Feldmann, Georg; Maitra, Anirban
CS   Department of Pathology, The Sol Goldman Pancreatic Cancer Research
     Center, Johns Hopkins University School of Medicine, Baltimore, MD, USA
SO   Pancreatology (2008), 8(6), 608-616
     CODEN: PANCC2; ISSN: 1424-3903
PB   S. Karger AG
DT   Journal
LA   English
AB   Background: Pancreatic cancer is an almost uniformly fatal disease, and
     early detection is a crit. determinant of improved survival. A variety of
     noninvasive precursor lesions of pancreatic adenocarcinoma have been
     identified, which provide a unique opportunity for intervention prior to
     onset of invasive cancer. Biomarker discovery in precursor lesions has
     been hampered by the ready availability of fresh specimens, and limited
     yields of proteins suitable for large scale screening. Methods: We
     utilized Liq. Tissue, a novel technique for protein extn. from archival
     formalin-fixed material, and mass spectrometry to conduct a global
     proteomic anal. of an intraductal papillary mucinous neoplasm (IPMN).
     Tissue microarrays comprised of 38 IPMNs were used for validation of
     candidate proteins. Results: The proteomic anal. of the IPMN Liq. Tissue
     lysate resulted in identification of 1,534 peptides corresponding to 523
     unique proteins. A subset of 25 proteins was identified that had
     previously been reported as upregulated in pancreatic cancer.
     Immunohistochem. anal. for two of these, deleted in malignant brain tumors
     1 (***DMBT1***) and tissue transglutaminase 2 (TGM2), confirmed their
     overexpression in IPMNs. Conclusion: Global proteomics anal. using the
     Liq. Tissue workflow is a feasible approach for unbiased biomarker
     discovery in limited archival material, particularly applicable to
     precursor lesions of cancer.
RE.CNT 58   THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2   ANSWER 4 OF 41   MEDLINE on STN
AN   2008707708   MEDLINE <<LOGINID::20090423>>
DN   PubMed ID: 18849643
TI   Application of a global proteomic approach to archival precursor lesions:
     deleted in malignant brain tumors 1 and tissue transglutaminase 2 are
     upregulated in pancreatic cancer precursors.
AU   Cheung Wang; Darfler Marlene M; Alvarez Hector; Hood Brian L; Conrads
     Thomas P; Habbe Nils; Krizman David B;   ***Mollenhauer Jan*** ; Feldmann
     Georg; Maitra Anirban
CS   Department of Pathology, The Sol Goldman Pancreatic Cancer Research
     Center, Johns Hopkins University School of Medicine, Baltimore, MD 21231,
     USA.
NC   P50CA62924 (United States NCI NIH HHS)
SO   Pancreatology : official journal of the International Association of
     Pancreatology (IAP) ... [et al.], (2008) Vol. 8, No. 6, pp. 608-16.
     Electronic Publication: 2008-10-13.
     Journal code: 100966936. E-ISSN: 1424-3911.
CY   Switzerland
DT   Journal; Article; (JOURNAL ARTICLE)
     (RESEARCH SUPPORT, N.I.H., EXTRAMURAL)
     (RESEARCH SUPPORT, NON-U.S. GOV'T)
LA   English

AB   BACKGROUND: Pancreatic cancer is an almost uniformly fatal disease, and
      early detection is a critical determinant of improved survival. A variety
      of noninvasive precursor lesions of pancreatic adenocarcinoma have been
      identified, which provide a unique opportunity for intervention prior to
      onset of invasive cancer. Biomarker discovery in precursor lesions has
      been hampered by the ready availability of fresh specimens, and limited
      yields of proteins suitable for large scale screening. METHODS: We
      utilized Liquid Tissue, a novel technique for protein extraction from
      archival formalin-fixed material, and mass spectrometry to conduct a
      global proteomic analysis of an intraductal papillary mucinous neoplasm
      (IPMN). Tissue microarrays comprised of 38 IPMNs were used for validation
      of candidate proteins. RESULTS: The proteomic analysis of the IPMN Liquid
      Tissue lysate resulted in identification of 1,534 peptides corresponding
      to 523 unique proteins. A subset of 25 proteins was identified that had
      previously been reported as upregulated in pancreatic cancer.
      Immunohistochemical analysis for two of these, deleted in malignant brain
      tumors 1 (***DMBT1***) and tissue transglutaminase 2 (TGM2), confirmed
      their overexpression in IPMNs. CONCLUSION: Global proteomics analysis
      using the Liquid Tissue workflow is a feasible approach for unbiased
      biomarker discovery in limited archival material, particularly applicable
      to precursor lesions of cancer.
      Copyright 2008 S. Karger AG, Basel and IAP.

L2   ANSWER 5 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 4
AN   2007:440147 BIOSIS <<LOGINID::20090423>>
DN   PREV200700436905
TI   Regulation of   ***DMBT1***   via NOD2 and TLR4 in intestinal epithelial
      cells modulates bacterial recognition and invasion.
AU   Rosenstiel, Philip; Sina, Christian; End, Caroline; Renner, Marcus; Lyer,
      Stefan; Till, Andreas; Hellmig, Stephan; Nikolaus, Susanna; Foelsch,
      Ulrich R.; Helmke, Burkhard; Autschbach, Frank; Schirmacher, Peter;
      Kioschis, Petra; Hafner, Mathias; Poustka, Annemarie;   ***Mollenhauer,***
   ***   Jan*** ; Schreiber, Stefan [Reprint Author]
CS   Univ Hosp Schleswig Holstein, Inst Clin Mol Biol, Campus
      Kiel,Schittenhelmstrache 12, Kiel, Germany
      s.schreiber@mucosa.de
SO   Journal of Immunology, (JUN 15 2007) Vol. 178, No. 12, pp. 8203-8211.
      CODEN: JOIMA3. ISSN: 0022-1767.
DT   Article
LA   English
ED   Entered STN: 15 Aug 2007
      Last Updated on STN: 15 Aug 2007
AB   Mucosal epithelial cell layers are constantly exposed to a complex
      resident microflora. Deleted in malignant brain tumors 1 (***DMBT1***
) belongs to the group of secreted scavenger receptor cysteine-rich
      proteins and is considered to be involved in host defense by pathogen
      binding. This report describes the regulation and function of
       DMBT1   in intestinal epithelial cells, which form the primary
      immunological barrier for invading pathogens. We report that intestinal
      epithelial cells up-regulate   ***DMBT1***   upon proinflammatory stimuli
      (e.g., TNF-alpha, LPS). We demonstrate that   ***DMBT1***   is a target

gene for the intracellular pathogen receptor NOD2 via NF-kappa B
activation. ***DMBT1*** is strongly up-regulated in the inflamed
intestinal mucosa of Crohn's disease patients with wild-type, but not with
mutant NOD2. We show that ***DMBT1*** inhibits cytoinvasion of
Salmonella enterica and LPS- and muramyl dipeptide-induced NF-kappa B
activation and cytokine secretion in vitro. Thus, ***DMBT1*** may
play an important role in the first line of mucosal defense conferring
immune exclusion of bacterial cell wall components. Dysregulated
intestinal ***DMBT1*** expression due to mutations in the NOD2/CARD15
gene may be part of the complex pathophysiology of barrier dysfunction in
Crohn's disease.

L2   ANSWER 6 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 5
AN   2007:421389 BIOSIS <<LOGINID::20090423>>
DN   PREV200700416637
TI   Genetic mapping in mice identifies ***DMBT1*** as a candidate modifier
      of mammary tumors and breast cancer risk.
AU   Blackburn, Anneke C.; Hill, Linda Z.; Roberts, Amy L.; Wang, Jun; Aud,
      Dee; Jung, Jimmy; Nikolcheva, Tania; Allard, John; Peltz, Gary; Otis,
      Christopher N.; Cao, Qing J.; Ricketts, Reva St. J.; Naber, Stephen P.;
         Mollenhauer, Jan ; Poustka, Annemarie; Malamud, Daniel; Jerry, D.
      Joseph [Reprint Author]
CS   Univ Massachusetts, Dept Vet and Anim Sci, Paige Lab, 161 Holdsworth Way,
      Amherst, MA 01003 USA
      jjerry@vasci.umass.edu
SO   American Journal of Pathology, (JUN 2007) Vol. 170, No. 6, pp. 2030-2041.
      CODEN: AJPAA4. ISSN: 0002-9440.
DT   Article
LA   English
ED   Entered STN: 8 Aug 2007
      Last Updated on STN: 8 Aug 2007
AB   Low-penetrance breast cancer susceptibility alleles seem to play a
      significant role in breast cancer risk but are difficult to identify in
      human cohorts. A genetic screen of 176 N2 backcross progeny of two
      TrP53(+/-) strains, BALB/c and C57BL/6, which differ in their
      susceptibility to mammary tumors, identified a modifier of mammary tumor
      susceptibility in an similar to 25-Mb interval on mouse chromosome 7
      (designated SuprMam1). Relative to heterozygotes, homozygosity for BALB/c
      alleles of SuprMam1 significantly decreased mammary tumor latency from
      70.7 to 61.1 weeks and increased risk twofold (P = 0.002).   ***Dmbt1***
      (deleted in malignant brain tumors 1) was identified as a candidate
      modifier gene within the SuprMam1 interval because it was differentially
      expressed in mammary tissues from BALB/c-Trp53(+/-) and C57BL/6-TrP53(+/-)
      mice.   ***Dmbt1*** mRNA and protein was reduced in mammary glands of
      the susceptible BALB/c mice. Immunohistochemical staining demonstrated
      that ***DMBT1*** protein expression was also significantly reduced in
      normal breast tissue from women with breast cancer (staining score, 1.8; n
      = 46) compared with cancer-free controls (staining score, 3.9; n = 53; P <
      0.0001). These experiments demonstrate the use of Trp53(+/-) mice as a
      sensitized background to screen for low-penetrance modifiers of cancer.
      The results identify a novel mammary tumor susceptibility locus in mice
      and support a role for ***DMBT1*** in suppression of inammary tumors
      in both miceandwomen.

L2   ANSWER 7 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 6

TI   ***DMBT1***   confers mucosal protection in vivo and a deletion variant
      is associated with Crohn's disease.

AU   Renner, Marcus; Bergmann, Gaby; Krebs, Inge; End, Caroline; Lyer, Stefan;
      Hilberg, Frank; Helmke, Burkhard; Gassler, Nikolaus; Autschbach, Frank;
      Bikker, Floris; Strobel-Freidekind, Olga; Gronert-Sum, Sabine; Benner,
      Axel; Blaich, Stephanie; Wittig, Rainer; Hudler, Melanie; Ligtenberg,
      Antoon J.; Madsen, Jens; Holmskov, Uffe; Annese, Vito; Latiano, Anna;
      Schirmacher, Peter; Amerongen, Arie V. Nieuw; D'Amato, Mauro; Kioschis,
      Petra; Hafner, Mathias; Poustka, Annemarie; ***Mollenhauer, Jan***
      [Reprint Author]
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, Neuenheimer Feld 280,
      D-69120 Heidelberg, Germany
      j.mollenhauer@dkfz.de
AB   Background & Aims: Impaired mucosal. defense plays an important role in
      the pathogenesis of Crohn's disease (CD), one of the main subtypes of
      inflammatory bowel disease (IBD). Deleted in malignant brain tumors 1(
         DMBT1   ) is a secreted scavenger receptor cysteine-rich protein
with
      predominant expression in. the intestine and has been proposed to exert
      possible functions in regenerative processes and pathogen defense. Here,
      we aimed at analyzing the role of   ***DMBT1***   in IBD. Methods: We
      studied   ***DMBT1***   expression in IBD and normal tissues by
      quantitative reverse transcription-polymerase chain reaction,
      immunohistochemistry, and mRNA in situ hybridization. Genetic
      polymorphisms within   ***DMBT1***   were analyzed in an Italian IBD
      case-control sample.   ***Dmbt1***   (-/-) mice were generated,
      characterized, and analyzed for their susceptibility to dextran sulfate
      sodium-induced colitis. Results: ***DMBT1***   levels correlate with
      disease activity in inflamed IBD tissues. A highly significant fraction
      of the patients with IBD displayed up-regulation of   ***DMBT1***
      specifically in the intestinal epithelial surface cells and Paneth cells.
      A deletion allele of   ***DMBT1***   with a reduced: number of scavenger
      receptor cysteine-rich domain coding exons is associated with an increased
      risk of CD (P =.00056; odds ratio, 1.75) but not for ulcerative colitis.
         Dmbt1   (-/-) mice display enhanced susceptibility to dextran
sulfate
      sodium-induced colitis and elevated Tnf, Il6, and Nod2 expression levels
      during inflammation. Conclusions: ***DMBT1***   may play a role in
      intestinal mucosal protection and prevention of inflammation. Impaired
         DMBT1   function may contribute to the pathogenesis of CD.

L2   ANSWER 8 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 7
TI   ***DMBT1***   is frequently downregulated in well-differentiated gastric
      carcinoma but more frequently upregulated across various gastric cancer
      types.
AU   Conde, Ana R. [Reprint Author]; Martins, Ana P.; Brito, Miguel; Manuel,

Armandina; Ramos, Sancia; Malta-Vacas, Joana; Renner, Marcus; Poustka,
Annemarie;   ***Mollenhauer, Jan*** ; Monteiro, Carolino
CS   Univ Lisbon, Fac Farm, Av Prof Gama Pinto, P-1649003 Lisbon, Portugal
arconde@ff.ul.pt
DT   Article
LA   English
ED   Entered STN: 1 Aug 2007
Last Updated on STN: 1 Aug 2007
AB   Well-differentiated gastric carcinomas are considered to represent a
distinct entity emerging via specific molecular changes different from
those found in other gastric carcinoma types. The gene deleted in
malignant brain tumours 1 (***DMBT1***) at 10q25.3-q26.1 codes for a
protein presumably involved in cell differentiation and protection and has
been proposed as a candidate tumour suppressor for brain and epithelial
cancer. One study reported a loss of ***DMBT1***   expression in 12.5%
(5/40) of gastric cancer samples. Here, we examined in more detail
  DMBT1   protein and mRNA expression in 78 primary gastric tumour
samples and corresponding normal gastric mucosa.   ***DMBT1***   was
expressed in all non-tumour gastric mucosa tissues. Eleven out of 71
(15%) gastric tumours were negative for the ***DMBT1***   protein in
immunohistochemical analyses. Lack of ***DMBT1***   expression was
significantly more frequently found in well-differentiated gastric tumours
(6/18 well-differentiated tumours vs. 5/53 other subtypes; P=0.025).
Quantitative RT-PCR revealed a downregulation of the ***DMBT1***   niRNA
for 8/21 (38%) cases, while the remaining 13 cases (62%) displayed a
substantial upregulation. Our data suggest that a loss of ***DMBT1***
expression may preferentially take place in well-differentiated gastric
carcinoma. However, an upregulation of ***DMBT1***   expression is more
frequently found across all gastric cancer types.

AN   2008:70436 BIOSIS <<LOGINID::20090423>>
DN   PREV200800053239
TI   Salivary agglutinin/gilycoprotein-340/ ***DMBT1*** : a single molecule
with variable composition and with different functions in infection,
inflammation and cancer.
AU   Ligtenberg, Antoon J. M. [Reprint Author]; Veerman, Enno C. I.; Nieuw
Amerongen, Arie V.;   ***Mollenhauer, Jan***
CS   Free Univ Amsterdam, Acad Ctr Dent, Dept Oral Biochem, Boechorststr 7,
NL-1081 BT Amsterdam, Netherlands
ajm.ligtenberg@vumc.nl
DT   Article
General Review; (Literature Review)
LA   English
ED   Entered STN: 9 Jan 2008
Last Updated on STN: 9 Jan 2008
AB   Salivary agglutinin (SAG), lung glycoprotein-340 (gp-340) and Deleted in
Malignant Brain Tumours 1 (***DMBT1***) are three names for identical
proteins encoded by the ***dmbt1***   gene.   ***DMBT1*** /SAG/gp-340
belongs to the scavenger receptor cysteine-rich (SRCR) superfamily of
proteins, a superfamily of secreted or membrane-bound proteins with SRCR

domains that are highly conserved down to sponges, the most ancient
metazoa. On the one hand, ***DMBT1*** may represent an innate defence
factor acting as a pattern recognition molecule. It interacts with a
broad range of pathogens, including cariogenic streptococci and
Helicobacter pylori, influenza viruses and HIV, but also with mucosal
defence proteins, such as IgA, surfactant proteins and MUC5B. Stimulation
of alveolar macrophage migration, suppression of neutrophil oxidative
burst and activation of the complement cascade point further to an
important role in the regulation of inflammatory responses. On the other
hand, ***DMBT1*** has been demonstrated to play a role in epithelial
and stem cell differentiation. Inactivation of the gene coding for this
protein may lead to disturbed differentiation, possibly resulting in
tumour formation. These data strongly point to a role for ***DMBT1***
as a molecule linking innate immune processes with regenerative processes.

L2   ANSWER 10 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 9
AN   2007:601740 BIOSIS <<LOGINID::20090423>>
DN   PREV200700605050
TI   ***Dmbt1*** is a target gene of NOD2/CARD15 and protects intestinal
      epithelial cells from bacterial invasion.
AU   Rosenstiel, Philip; Sina, Christian; Hellmig, Stephan; Nikolaus, Susanna;
      End, Caroline; Renner, Markus; Lyer, Stephan; Helmke, Burkhard; Hafner,
      Mathias; Poustka, Annemarie; ***Mollenhauer, Jan*** ; Schreiber, Stefan
SO   Gastroenterology, (APR 2007) Vol. 132, No. 4, Suppl. 2, pp. A550.
      Meeting Info.: Digestive Disease Week Meeting/108th Annual Meeting of the
      American-Gastroenterological-Association. Washington, DC, USA. May 19 -24,
      2007. Amer Gastroenterol Assoc; Amer Assoc Study Liver Dis; Amer Soc
      Gastrointestinal Endoscopy; Soc Surg Alimentary Tract.
      CODEN: GASTAB. ISSN: 0016-5085.
DT   Conference; (Meeting)
      Conference; Abstract; (Meeting Abstract)
LA   English
ED   Entered STN: 6 Dec 2007
      Last Updated on STN: 6 Dec 2007
AB   Background&Aims: Mucosal epithelial cell layers are constantly exposed to
      a complex resident microflora. ***DMBT1*** (deleted in malignant
      brain tumors 1) belongs to the group of secreted scavenger receptor
      cysteine-rich (SRCR) proteins and is considered to be involved in host
      defense by pathogen binding. This report describes the regulation and
      function of ***DMBT1*** in intestinal epithelial cells, which form the
      primary immunological barrier for invading pathogens.Methods:Expression of
      DMBT1 was determined by Taqman real time PCR, Western blot and
      immunohistochemistry. Promotorstudies were performed using luciferase
      reporter gene experiments. Bacterial invasion was tested by gentamicin
      protection assay and siRNA approaches. Results: We demonstrate that
      DMBT1 is a target gene for the intracellular pathogen receptor
      NOD2 via NF-KB activation, ***DMBT1*** is strongly upregulated in the
      inflamed intestinal mucosa of Crohn disease patients with wild-type, but
      not with mutant NOD2. We show that ***DMBT1*** inhibits cytoinvasion
      of Salmonella enterica and LPS-induced Toll-like receptor 4 signalling.
      Silencing of ***DMBT1*** in intestinal epithelial cells leads to an
      increased invasion of bacteria. Conclusions: ***DMBT1*** may play an
      important role in the first line of mucosal defense conferring immune
      exclusion of bacterial cell wall components. Dysregulated intestinal
      DMBT1 expression due to mutations in the NOD2/CARD15 gene may be
      part of the complex pathophysiology of barrier dysfunction in Crohn

disease.

AN   2007:343766   SCISEARCH <<LOGINID::20090423>>
GA   The Genuine Article (R) Number: 142JH
TI   Respiratory ***DMBT1***   levels increase during lung maturation and
      infection and modulate surfactant function
AU   Mueller, Hanna (Reprint); End, Caroline; Weiss, Christel; Renner, Marcus;
        Mollenhauer, Jan   ; Linderkamp, Otwin
CS   Univ Heidelberg, Div Neonatol, Dept Pediat, D-6900 Heidelberg, Germany;
      Deutsch Krebsforschungszentrum, Div Mol Genome Anal, D-6900 Heidelberg,
      Germany; Univ Hosp Mannheim, Inst Med Sci, Mannheim, Germany
CYA   Germany
SO   EUROPEAN JOURNAL OF PEDIATRICS, (MAR 2007) Vol. 166, No. 3, pp. 279-279.
      ISSN: 0340-6199.
PB   SPRINGER, 233 SPRING STREET, NEW YORK, NY 10013 USA.
DT   Conference; Journal
LA   English
REC   Reference Count: 0
ED   Entered STN: 5 Apr 2007
      Last Updated on STN: 5 Apr 2007

AN   2008127501   EMBASE   <<LOGINID::20090423>>
TI   ***DMBT1***   as an archetypal link between infection, inflammation, and
      cancer.
AU   ***Mollenhauer, Jan, Dr. (correspondence)***   ; End, C.; Renner, M.;
      Lyer, S.; Poustka, A.
CS   Division of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
      Im Neuenheimer Feld 280, 69120 Heidelberg, Germany. j.mollenhauer@dkfz.de
AU   ***Mollenhauer, Jan, Dr. (correspondence)***   ; Lyer, S.
CS   Department of Molecular Oncology, Institute of Medical Biology, University
      of Southern Denmark, Odense-C, Denmark. j.mollenhauer@dkfz.de
SO   Inmunologia, (Oct 2007) Vol. 26, No. 4, pp. 193-209.
      Refs: 141
      ISSN: 0213-9626 CODEN: INMNEC
CY   Spain
DT   Journal; General Review; (Review)
FS   026   Immunology, Serology and Transplantation
      029   Clinical and Experimental Biochemistry
      004   Microbiology: Bacteriology, Mycology, Parasitology and Virology
LA   English
SL   English; Spanish; Castilian
ED   Entered STN: 2 Apr 2008
      Last Updated on STN: 2 Apr 2008
AB   Epidemiological and molecular studies have pointed to links between
      infection, inflammation and cancer, which appear to converge at the
      molecular level in mechanisms associated with innate immunity. Here, the
      present knowledge about the secreted scavenger receptor cysteine-rich
      (SRCR) protein Deleted in Malignant Brain Tumors 1 (***DMBT1***   ), also
      known as glycoprotein-340 or salivary agglutinin, is summarized.
        DMBT1   is differentially expressed in various cancer types with
      most of these displaying a downregulation. As a lumenally secreted
      protein, it exerts functions in innate pathogen defense and the regulation
      of inflammation. By contrast, it may trigger epithelial and stem cell

differentiation as an extracellular matrix protein. Its broad
responsiveness to pathophysiological stimuli points to a general role in
cell and tissue protection, which possibly is best circumscribed by
linking pathogen defense and regulation of the inflammatory response to
regenerative processes. Compelling similarities to the functions of SRCR
proteins in primitive metazoa such as sponges and sea urchins exist, which
support that its various functions may rely on an ancient and simple
principle, i.e. the differential mediation of adhesion and anti-adhesion.
Similar to NF-.kappa.B signaling pathways, which are also indirectly
regulated by   ***DMBT1***   , the present state of the art indicates that
   DMBT1   not only could exert disease-preventing, but probably also
disease-promoting functions. Taken together, ***DMBT1***   may
represent a paradigm for an archetypal link between infection,
inflammation, and cancer. Understanding its complex mode of action
promises novel insights into the origin and the molecular basis of major
human diseases.

AB   BACKGROUND: Deleted in Malignant Brain Tumors 1 (***DMBT1***   ) is a
        secreted scavenger receptor cysteine-rich protein that binds various
        bacteria and is thought to participate in innate pulmonary host defense.
        We hypothesized that pulmonary ***DMBT1***   could contribute to
        respiratory distress syndrome in neonates by modulating surfactant
        function. METHODS: ***DMBT1***   expression was studied by
        immunohistochemistry and mRNA in situ hybridization in post-mortem lungs
        of preterm and full-term neonates with pulmonary hyaline membranes. The
        effect of human recombinant   ***DMBT1***   on the function of bovine and
        porcine surfactant was measured by a capillary surfactometer.
          DMBT1   -levels in tracheal aspirates of ventilated preterm and term
        infants were determined by ELISA. RESULTS: Pulmonary   ***DMBT1***   was
        localized in hyaline membranes during respiratory distress syndrome. In
        vitro addition of human recombinant   ***DMBT1***   to the surfactants
        increased surface tension in a dose-dependent manner. The   ***DMBT1***
        -mediated effect was reverted by the addition of calcium depending on the
        surfactant preparation. CONCLUSION: Our data showed pulmonary

DMBT1   expression in hyaline membranes during respiratory distress
syndrome and demonstrated that   ***DMBT1***   increases lung surface
tension in vitro. This raises the possibility that   ***DMBT1***   could
antagonize surfactant supplementation in respiratory distress syndrome and
could represent a candidate target molecule for therapeutic intervention
in neonatal lung disease.

L2   ANSWER 14 OF 41 CAPLUS COPYRIGHT 2009 ACS on STN
AN   2007:1398177 CAPLUS <<LOGINID::20090423>>
DN   148:446649
TI   Deleted in Malignant Brain Tumors 1 (***DMBT1***) is present in
      hyaline membranes and modulates surface tension of surfactant
AU   Mueller, Hanna; End, Caroline; Renner, Marcus; Helmke, Burkhard M.;
      Gassler, Nikolaus; Weiss, Christel; Hartl, Dominik; Griese, Matthias;
      Hafner, Mathias; Poustka, Annemarie; ***Mollenhauer, Jan*** ; Poeschl,
      Johannes
CS   Division of Neonatology, Department of Pediatrics, University of
      Heidelberg, Heidelberg, 69120, Germany
SO   Respiratory Research (2007), 8(1), No pp. given
      CODEN: RREEBZ; ISSN: 1465-993X
      URL: http://respiratory-research.com/content/pdf/1465-9921-8-69.pdf
PB   BioMed Central Ltd.
DT   Journal; (online computer file)
LA   English
AB   Background: Deleted in Malignant Brain Tumors 1 (***DMBT1***) is a
      secreted scavenger receptor cysteine-rich protein that binds various
      bacteria and is thought to participate in innate pulmonary host defense.
      The authors hypothesized that pulmonary   ***DMBT1***   could contribute
      to respiratory distress syndrome in neonates by modulating surfactant
      function. Methods: ***DMBT1***   expression was studied by
      immunohistochem. and mRNA in situ hybridization in post-mortem lungs of
      preterm and full-term neonates with pulmonary hyaline membranes. The
      effect of human recombinant   ***DMBT1***   on the function of bovine and
      porcine surfactant was measured by a capillary surfactometer.
       DMBT1 -levels in tracheal aspirates of ventilated preterm and term
      infants were detd. by ELISA. Results: Pulmonary   ***DMBT1***   was
      localized in hyaline membranes during respiratory distress syndrome. In
      vitro addn. of human recombinant   ***DMBT1***   to the surfactants
      increased surface tension in a dose-dependent manner. The   ***DMBT1***
      -mediated effect was reverted by the addn. of calcium depending on the
      surfactant prepn. Conclusions: The data showed pulmonary   ***DMBT1***
      expression in hyaline membranes during respiratory distress syndrome and
      demonstrated that   ***DMBT1***   increases lung surface tension in vitro.
      This raises the possibility that   ***DMBT1***   could antagonize
      surfactant supplementation in respiratory distress syndrome and could
      represent a candidate target mol. for therapeutic intervention in neonatal
      lung disease.
RE.CNT 41   THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2   ANSWER 15 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 11
AN   2006:604365 BIOSIS <<LOGINID::20090423>>
DN   PREV200600609765
TI   Molecular characterization of the porcine deleted in malignant brain
      tumors 1 gene (***DMBT1***).
AU   Haase, Bianca; Humphray, Sean J.; Lyer, Stefan; Renner, Marcus; Poustka,

```
            Annemarie;    ***Mollenhauer, Jan***  ; Leeb, Tosso [Reprint Author]
CS    Univ Bern, Vetsuisse Fac, Inst Genet, Bremgartenstr 109A, CH-3001 Bern,
      Switzerland
      Tosso.Leeb@itz.unibe.ch
SO    Gene (Amsterdam), (JUL 19 2006) Vol. 376, No. 2, pp. 184-191.
      CODEN: GENED6. ISSN: 0378-1119.
DT    Article
LA    English
ED    Entered STN: 15 Nov 2006
      Last Updated on STN: 15 Nov 2006
```

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AB    The human gene deleted in malignant brain tumors 1 (  ***DMBT1***  ) is
      considered to play a role in tumorigenesis and pathogen defense.  It
      encodes a protein with multiple scavenger receptor cysteine-rich (SRCR)
      domains, which are involved in recognition and binding of a broad spectrum
      of bacterial pathogens.  The SRCR domains are encoded by highly homologous
      repetitive exons, whose number in humans may vary from 8 to 13 due to
      genetic polymorphism.  Here, we characterized the porcine   ***DMBTI***
      gene on the mRNA and genomic level.  We assembled a 4.5 kb porcine
        ***DMBT1***   cDNA sequence from RT-PCR amplified seminal vesicle RNA.
      The porcine   ***DMBT1***   cDNA contains an open reading frame of 4050
      nt.  The transcript gives rise to a putative polypeptide of 1349 amino
      acids with a calculated mass of 147.9 kDa.  Compared to human
        ***DMBT1***  , it contains only four N-terminal SRCR domains.  Northern
      blotting revealed transcripts of similar to 4.7 kb in size in the tissues
      analyzed.  Analysis of ESTs suggested the existence of secreted and
      transmembrane variants.  The porcine   ***DMBT1***   gene spans about 54
      kb on chromosome 14q28-q29.  In contrast to the characterized cDNA, the
      genomic BAC clone only contained 3 exons coding for N-terminal SRCR
      domains.  In different mammalian  ***DMBT1***   orthologs large
      interspecific differences in the number of SRCR exons and utilization of
      the transmembrane exon exist.  Our data suggest that the porcine
        ***DMBT1***   gene may share with the human   ***DMBT1***   gene
      additional intraspecific variations in the number of SRCR-coding exons.
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L2    ANSWER 16 OF 41  CAPLUS  COPYRIGHT 2009 ACS on STN
AN    2005:953991  CAPLUS <<LOGINID::20090423>>
DN    143:260332
TI    Use of  ***DMBT1***   protein for capturing sulfate and phosphate groups
      exposed in disease-associated agents
IN     ***Mollenhauer, Jan***  ; End, Caroline; Blaich, Stephanie; Bergmann,
      Gaby; Renner, Marcus; Lyer, Stefan; Wittig, Rainer; Poustka, Annemarie;
      Bikker, Floris; Ligtenberg, Anton; Nieuw-Amerongen, Arie; Veerman, Enno
PA    Deutsches Krebsforschungszentrum Stiftung des Oeffentlichen Rechts,
      Germany
SO    Eur. Pat. Appl., 57 pp.
      CODEN: EPXXDW
DT    Patent
LA    English
FAN.CNT 1
      PATENT NO.           KIND   DATE       APPLICATION NO.         DATE
      ---------------      ----   --------   --------------------    --------
PI    EP 1568374           A1     20050831   EP 2004-4281            20040225
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
      WO 2005079834        A1     20050901   WO 2005-EP1994          20050225
      WO 2005079834        A9     20051027
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        W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
            CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
            GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
            LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
            NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
            TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
       RW:  BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
            AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
            EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
            RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
            MR, NE, SN, TD, TG
     EP 1727558            A1    20061206    EP 2005-732131          20050225
         R:  AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
     US 20080234185        A1    20080925    US 2006-590657          20060825
PRAI EP 2004-4281          A     20040225
     WO 2005-EP1994        W     20050225
```

AB   Disclosed is the use of   ***DMBT1***   , or of the nucleic acid encoding
     it, for the manuf. of a medicament for the treatment of a patient
     suffering from a disease caused by an agent which possesses at least one
     accessible sulfate and/or at least one accessible phosphate group.
        DMBT1   may also be used as a diagnostic for diagnosing the
     susceptibility of an individual to sulfate or phosphate groups, as well in
     methods for diagnosis, prophylaxis or treatment of diseases caused by an
     agent which possesses at least one accessible sulfate and/or at least one
     accessible phosphate group. The invention is based on the discovery that
     human protein   ***DMBT1***   (Deleted in Malignant Brain Tumors 1) is a
     dual-specific pattern recognition receptor for non-self (bacterial cell
     wall components, gp120 of HIV, damage-, inflammation-, and cancer-causing
     sulfated carbohydrates) and self structures (DNA, phospholipids, cell
     surface and extracellular matrix carbohydrates), which interacts with
     accessible sulfate and or phosphate groups, which are present on numerous
     compds., compns., and organisms. Pattern recognition of   ***DMBT1***
     is mediated via an 11-amino acid motif (GRVEVLYRGSW) that binds sulfate
     and phosphate groups. By acting as a dual-specific PRR,   ***DMBT1***
     may exert a general insulator function against a broad range of pathogens,
     which predicts a contribution of   ***DMBT1***   germline deletions to
     human susceptibility to infection, inflammation, and cancer. Furthermore,
     a 40% decreased level of   ***DMBT1***   in male mice correlates with an
     increased susceptibility and with a deficient protection against dextran
     sulfate sodium-induced tissue damage and inflammation in the colon.
RE.CNT 7   THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2   ANSWER 17 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
     STN   DUPLICATE 12
AN   2005:324157 BIOSIS <<LOGINID::20090423>>
DN   PREV200510117337
TI   Generation of a vector system facilitating cloning of   ***DMBT1***
     variants and recombinant expression of functional full-length
       DMBT1   .
AU   End, Caroline; Lyer, Stefan; Renner, Marcus; Stahl, Cordula; Ditzer,
     Jutta; Holloschi, Andreas; Kuhn, Hella-M.; Flammann, Heiko T.; Poustka,
     Annemarie; Hafner, Mathias;   ***Mollenhauer, Jan***   [Reprint Author];
     Kioschis, Petra
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, Neuenheimer Feld 280,
     D-69120 Heidelberg, Germany

AB   Deleted in malignant brain tumours 1 (***DMBT1***) codes for a similar
        to 340 kDa glycoprotein with highly repetitive scavenger receptor
        cysteine-rich (SRCR) domains.   ***DMBT1***   was implicated in cancer.
        defence against viral and bacterial infections, and differentiation of
        epithelial cells. Recombinant expression and purification of
         DMBT1   is an essential step for systematic standardized functional
        research and towards the evaluation of its therapeutical potential. So
        far,   ***DMBT1***   is obtained from natural sources such as
        bronchioalveolar lavage or saliva, resulting in time consuming sample
        collection, low yields, and protein preparations which may substantially
        vary due to differential processing and genetic polymorphism, all of which
        impedes functional research on   ***DMBT1*** . Cloning of   ***DMBT1***
        cDNAs is hampered because of the size and the 13 highly homologous SRCR
        exons. In this Study, we report oil the setup of a vector system that
        facilitates cloning of   ***DMBT1***   variants. We demonstrate
        applicability of the vector system by expression of the largest
         DMBT1   variant in a tetracycline-inducible mammalian expression
        system using the Chinese hamster ovary cell line. Yields Lip to 30 mg
        rDMBT1 per litre of cell Culture supernatant could be achieved with an
        optimized production procedure. By harnessing the specific
        bacteria-binding property of   ***DMBT1***   we established an affinity
        purification procedure which allows the isolation of more than 3 mg rDMBT1
        with a Purity of about 95 %. Although the glycosylation moieties of
        rDMBT1 are different front   ***DMBT1***   (SAG) isolated front saliva, we
        demonstrate that rDMBT1 is functionally active in aggregating
        Gram-positive and Gram-negative bacteria and binding to C1q and
        lactoferrin, which represent two known endogenous   ***DMBT1***   ligands.
        (c) 2005 Elsevier Inc. All rights reserved.

L2   ANSWER 18 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
        STN   DUPLICATE 13
AN   2005:69186 BIOSIS <<LOGINID::20090423>>
DN   PREV200500070157
TI   Bacteria binding by   ***DMBT1***   /SAG/gp-340 is confined to the
        VEVLXXXXW motif in its scavenger receptor cysteine-rich domains.
AU   Bikker, Floris J.; Ligtenberg, Antoon J. M. [Reprint Author]; End,
        Caroline; Renner, Marcus; Blaich, Stephanie; Lyer, Stefan; Wittig, Rainer;
        van't Hof, Wim; Veerman, Enno C. I.; Nazmi, Kamran; De Blieck-Hogervorst,
        Jolanda M. A.; Kioschis, Petra; Amerongen, Arie V. Nieuw; Poustka,
        Annemarie;   ***Mollenhauer, Jan***
CS   Acad Ctr Dent AmsterdamDept Oral Biochem, Free Univ Amsterdam,
        Boechorststr 7, NL-1081 BT, Amsterdam, Netherlands
        ajm.ligtenberg@vumc.nl
SO   Journal of Biological Chemistry, (November 12 2004) Vol. 279, No. 46, pp.
        47699-47703. print.
        CODEN: JBCHA3. ISSN: 0021-9258.
DT   Article
LA   English
ED   Entered STN: 16 Feb 2005

Last Updated on STN: 16 Feb 2005
AB   The scavenger receptor cysteine-rich (SRCR) proteins form an archaic group
      of metazoan proteins characterized by the presence of SRCR domains. These
      proteins are classified in group A and B based on the number of conserved
      cysteine residues in their SRCR domains, i.e. six for group A and eight
      for group B. The protein ***DMBT1***   (deleted in malignant brain
      tumors 1), which is identical to salivary agglutinin and lung gp-340,
      belongs to the group B SRCR proteins and is considered to be involved in
      tumor suppression and host defense by pathogen binding. In a previous
      study we used non-overlapping synthetic peptides covering the SRCR
      consensus sequence to identify a 16-amino acid bacteria-binding protein
      loop (peptide SRCRP2; QGRVEVLYRGSWGTVC) within the SRCR domains. In this
      study, using overlapping peptides, we pinpointed the minimal
      bacteria-binding site on SRCRP2, and thus   ***DMBT1***   , to an 11-amino
      acid motif (***DMBT1***   pathogen-binding site 1 or   ***DMBT1pbs1***
      ; GRVEVLYRGSW). An alanine substitution scan revealed that VEVL and Trp
      are critical residues in this motif. Bacteria binding by
        DMBT1pbs1   was different from the bacteria binding by the
      macrophage receptor MARCO in which an RXR motif was critical. In
      addition, the homologous consensus sequences of a number of SRCR proteins
      were synthesized and tested for bacteria binding. Only consensus
      sequences of   ***DMBT1***   orthologues bound bacteria by this motif.

L2   ANSWER 19 OF 41 SCISEARCH COPYRIGHT (c) 2009 The Thomson Corporation on
      STN
AN   2009:102902 SCISEARCH <<LOGINID::20090423>>
GA   The Genuine Article (R) Number: V80CV
TI   THE PUTATIVE TUMOR SUPPRESSOR ***DMBT1***   CONFERS MUCOSAL PROTECTION
      IN VIVO AND INHIBITS BACTERIAL INFECTION IN VITRO
AU   Renner, Marcus (Reprint); Bergmann, Gaby; Krebs, Inge; Lyer, Stefan; End,
      Caroline; Sina, Christian; Freidekind, Olga; Poustka, Annemarie;
        Mollenhauer, Jan
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, D-69120 Heidelberg,
      Germany
AU   End, Caroline; Kioschis, Petra; Haffner, Mathias
CS   Univ Appl Sci Mannheim, Inst Mol Biol & Cell Culture Technol, D-68163
      Mannheim, Germany
AU   Helmke, Burkhard; Gassler, Nikolaus; Autschbach, Frank
CS   Univ Heidelberg, Inst Pathol, D-69120 Heidelberg, Germany
AU   Sina, Christian; Rosenstiel, Philip; Schreiber, Stefan
CS   Univ Hosp Schleswig Holstein, Dept Med 1, D-24105 Kiel, Germany
AU   Reinhard, Claudia; Stoeger, Tobias; Schulz, Holger
CS   Natl Ctr Environm & Hlth GmbH, Inst Inhalat Biol, D-85764 Neuherberg,
      Germany
AU   Hilberg, Frank
CS   Boehringer Ingelheim Austria, NCE Pharmacol, R&D Vienna, A-1121 Vienna,
      Austria
CYA   Germany; Austria
SO   ANTICANCER RESEARCH, (SEP-OCT 2004) Vol. 24, No. 5D, pp. 3610-3611. MA
      422.
      ISSN: 0250-7005.
PB   INT INST ANTICANCER RESEARCH, EDITORIAL OFFICE 1ST KM KAPANDRITIOU-KALAMOU
      RD KAPANDRITI, PO BOX 22, ATHENS 19014, GREECE.
DT   Conference; Journal
LA   English
REC   Reference Count: 0
ED   Entered STN: 29 Jan 2009

L2   ANSWER 20 OF 41   CAPLUS   COPYRIGHT 2009 ACS on STN DUPLICATE 14
AN   2005:388452   CAPLUS <<LOGINID::20090423>>
DN   143:383836
TI   Differentially expressed genes in pancreatic ductal adenocarcinomas
      identified through serial analysis of gene expression
AU   Hustinx, Steven R.; Cao, Dengfeng; Maitra, Anirban; Sato, Norihiro;
      Martin, Sean T.; Sudhir, D.; Iacobuzio-Donahue, Christine; Cameron, John
      L.; Yeo, Charles J.; Kern, Scott E.; Goggins, Michael;   ***Mollenhauer,***
   ***   Jan*** ; Pandey, Akhilesh; Hruban, Ralph H.
CS   Department of Pathology, The Johns Hopkins Medical Institutions,
      Baltimore, MD, USA
SO   Cancer Biology & Therapy (2004), 3(12), 1254-1261
      CODEN: CBTAAO; ISSN: 1538-4047
PB   Landes Bioscience
DT   Journal
LA   English
AB   Serial anal. of gene expression (SAGE) is a powerful tool for the
      discovery of novel tumor markers. The publicly available online SAGE
      libraries of normal and neoplastic tissues
      (http://www.ncbi.nlm.nih.gov/SAGE/) have recently been expanded; in addn.,
      a more complete annotation of the human genome and better biocomputational
      techniques have substantially improved the assignment of differentially
      expressed SAGE "tags" to human genes. These improvements have provided us
      with an opportunity to re-evaluate global gene expression in pancreatic
      cancer using existing SAGE libraries. SAGE libraries generated from six
      pancreatic cancers were compared to SAGE libraries generated from 11
      non-neoplastic tissues. Compared to normal tissue libraries, we
      identified 453 SAGE tags as differentially expressed in pancreatic cancer,
      including 395 that mapped to known genes and 58 "uncharacterized" tags.
      Of the 395 SAGE tags assigned to known genes, 223 were overexpressed in
      pancreatic cancer, and 172 were underexpressed. In order to map the 58
      uncharacterized differentially expressed SAGE tags to genes, we used a
      newly developed resource called TAGmapper
      (http://tagmapper.ibioinformatics.org), to identify 16 addnl.
      differentially expressed genes. The differential expression of seven
      genes, involved in multiple cellular processes such as signal transduction
      (MIC-1), differentiation (***DMBT1***   and Neugrin), immune response
      (CD74), inflammation (CXCL2), cell cycle (CEB1) and enzymic activity
      (Kallikrein 6), was confirmed by either immunohistochem. labeling of
      tissue microarrays (Kallikrein 6, CD74 and   ***DMBT1***) or by RT-PCR
      (CEB1, Neugrin, MIC1 and CXCL2). Of note, Neugrin was one of the genes
      whose previously uncharacterized SAGE tag was correctly assigned using
      TAGmapper, validating the utility of this program. Novel differentially
      expressed genes in a cancer type can be identified by revisiting updated
      and expanded SAGE databases. TAGmapper should prove to be a powerful tool
      for the discovery of novel tumor markers through assignment of
      uncharacterized SAGE tags.
RE.CNT 54   THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD
                ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2   ANSWER 21 OF 41   BIOSIS   COPYRIGHT (c) 2009 The Thomson Corporation   on
      STN   DUPLICATE 15
AN   2004:130519   BIOSIS <<LOGINID::20090423>>
DN   PREV200400116079
TI   Carcinogen inducibility in vivo and down-regulation of   ***DMBT1***

during breast carcinogenesis.

AU   ***Mollenhauer, Jan***   [Reprint Author]; Helmke, Burkhard; Medina,
      Daniel; Bergmann, Gaby; Gassler, Nikolaus; Mueller, Hanna; Lyer, Stefan;
      Diedrichs, Laura; Renner, Marcus; Wittig, Rainer; Blaich, Stephanie;
      Hamann, Ute; Madsen, Jens; Holmskov, Uffe; Bikker, Floris; Ligtenberg,
      Antoon; Carlen, Anette; Olsson, Jan; Otto, Herwart F.; O'Malley, Bert;
      Poustka, Annemarie
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
      Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
      j.mollenhauer@dkfz-heidelberg.de; j.mollenhauer@dkfz-heidelberg.de
DT   Article
LA   English
ED   Entered STN: 3 Mar 2004
      Last Updated on STN: 3 Mar 2004
AB   Deleted in malignant brain tumors 1 (***DMBT1***) has been proposed as
      a candidate tumor suppressor for brain and epithelial cancer. Initial
      studies suggested loss of expression rather than mutation as the
      predominant mode of ***DMBT1*** inactivation. However, in situ
      studies in lung cancer demonstrated highly sophisticated changes of
       DMBT1 expression and localization, pointing to a chronological
      order of events. Here we report on the investigation of ***DMBT1***
      in breast cancer in order to test whether these principles might also be
      attributable to other tumor types. Comprehensive mutational analyses did
      not uncover unambiguous inactivating ***DMBT1*** mutations in breast
      cancer. Expression analyses in the human and mouse mammary glands pointed
      to the necessity of ***DMBT1*** induction. While age-dependent and
      hormonal effects could be ruled out, 9 of 10 mice showed induction of
       Dmbt1 expression after administration of the carcinogen
      7,12-dimethybenz(alpha)anthracene prior to the onset of tumorigenesis or
      other histopathological changes.   ***DMBT1*** displayed significant
      up-regulation in human tumor-flanking tissues compared to in normal breast
      tissues (P < 0.05). However, the breast tumor cells displayed a switch
      from lumenal secretion to secretion to the extracellular matrix and a
      significant down-regulation compared to that in matched normal flanking
      tissues (P < 0.01). We concluded that loss of expression also is the
      predominant mode of ***DMBT1*** inactivation in breast cancer. The
      dynamic behavior of ***DMBT1*** in lung carcinoma is fully reflected
      in breast cancer, which suggests that this behavior might be common to
      tumor types arising from monolayered epithelia.

L2   ANSWER 22 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 16
AN   2004:221390 BIOSIS <<LOGINID::20090423>>
DN   PREV200400224388
TI   Site-characteristic expression and induction of trefoil factor family 1, 2
      and 3 and malignant brain tumor-1 in normal and diseased intrahepatic bile
      ducts relates to biliary pathophysiology.
AU   Sasaki, Motoko; Tsuneyama, Koichi; Saito, Takahito; Kataoka, Hiroaki;
       Mollenhauer, Jan ; Poustka, Annemarie; Nakanuma, Yasuni [Reprint
      Author]
CS   Department of Human Pathology, Kanazawa University Graduate School of
      Medicine, Kanazawa, 920-8640, Japan

DT   Article
LA   English
ED   Entered STN: 21 Apr 2004
     Last Updated on STN: 21 Apr 2004
AB   Background/Aim: Trefoil factor family (TFF)1,2,3 are involved in a
     homeostasis/repair process of mucosal epithelia. In this study, the
     significance of TFF family and deleted in the malignant brain tumor-1 (
      DMBT1), a putative receptor of TFF2, in the intrahepatic biliary
     tree was investigated in normal and diseased livers. Materials and
     Methods: Expression of TFF1,2,3 and   ***DMBT1***   were examined
     immunohistochemically in primary biliary cirrhosis (PBC), primary
     sclerosing cholangitis (PSC), chronic viral hepatitis (CVH), extrahepatic
     biliary obstruction (EBO), and normal livers. Results: In normal livers,
     TFF1,3 and   ***DMBT1***   were infrequently detectable in large and
     rarely in small bile ducts, respectively. TFF2 was not detectable in
     large bile ducts. In large bile duct diseases (PSC and EBO), expression
     of TFF3 and   ***DMBT1***   were increased. In small bile duct diseases
     (PBC and CVH), expression of TFF2/ ***DMBT1***   was induced in
     moderately to severely damaged ducts irrespective of etiology.
     Conclusion: The intrahepatic biliary tree shows a site-characteristic
     expression and induction of TFF1,2,3 and   ***DMBT1*** . In large bile
     ducts, TFF1,3 were constitutively expressed and increased in pathologic
     bile ducts. In small bile ducts, TFF2/ ***DMBT1***   is induced in
     damaged ducts irrespective of etiologies. However, the
     cytoprotective/repair property of TFF2/ ***DMBT1***   may not be enough
     to prevent the following bile duct loss in PBC.

L2   ANSWER 23 OF 41 CAPLUS COPYRIGHT 2009 ACS on STN
AN   2004:759920 CAPLUS <<LOGINID::20090423>>
DN   141:258426
TI   ***DMBT1***   expression is down-regulated in breast cancer
AU   Braidotti, Paola; Nuciforo, Paolo G.;   ***Mollenhauer, Jan*** ; Poustka,
     Annemarie; Pellegrini, Caterina; Moro, Alessia; Bulfamante, Gaetano;
     Coggi, Guido; Bosari, Silvano; Pietra, Giuseppe G.
CS   S.Paolo Hospital and IRCCS Ospedale Maggiore, University of Milano, School
     of Medicine, Milan, 20142, Italy
SO   BMC Cancer (2004), 4, No pp. given
     CODEN: BCMACL; ISSN: 1471-2407
     URL: http://www.biomedcentral.com/content/pdf/1471-2407-4-46.pdf
PB   BioMed Central Ltd.
DT   Journal; (online computer file)
LA   English
AB   Background: The authors studied the expression of   ***DMBT1***   (deleted
     in malignant brain tumor 1), a putative tumor suppressor gene, in normal,
     proliferative, and malignant breast epithelium and its possible relation
     to the cell cycle. Methods: Sections from 17 benign lesions and 55
     carcinomas were immunostained with anti   ***DMBT1***   antibody (
      DMBTh12) and sections from 36 samples, were double-stained also
     with anti MCM5, one of the 6 pre-replicative complex proteins with cell
     proliferation-licensing functions.   ***DMBT1***   gene expression at the
     mRNA level was assessed by RT-PCR in frozen tissues samples from 39
     patients. Results: Normal glands and hyperplastic epithelium in benign
     lesions displayed a luminal polarized   ***DMBTh12***   immunoreactivity.
     Normal and hyperplastic epithelium adjacent to carcinomas showed a loss of
     polarization, with immunostaining present in basal and perinuclear
     cytoplasmic compartments.   ***DMBT1***   protein expression was
     down-regulated in the cancerous lesions compared to the normal and/or

hyperplastic epithelium adjacent to carcinomas (3/55 pos. carcinomas vs.
33/42 pos. normal/hyperplastic epithelia; p = 0.0001). In 72% of cases
RT-PCR confirmed immunohistochem. results. Most of normal and
hyperplastic mammary cells pos. with ***DMBTh12*** were also MCM5-pos.
Conclusions: The redistribution and up-regulation of ***DMBT1*** in
normal and hyperplastic tissues flanking malignant tumors and its
down-regulation in carcinomas suggests a potential role in breast cancer.
Moreover, the concomitant expression of DMTB1 and MCM5 suggests its
possible assocn. with the cell-cycle regulation.
RE.CNT 32   THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2   ANSWER 24 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 17
AN   2003:400542 BIOSIS <<LOGINID::20090423>>
DN   PREV200300400542
TI   CRP-ductin, the mouse homologue of gp-340/deleted in malignant brain
      tumors 1 (***DMBT1***), binds gram-positive and gram-negative bacteria
      and interacts with lung surfactant protein D.
AU   Madsen, Jens; Tornoe, Ida; Nielsen, Ole; Lausen, Mette; Krebs, Inge;
        Mollenhauer, Jan ; Kollender, Gaby; Poustka, Annemarie; Skjodt,
      Karsten; Holmskov, Uffe [Reprint Author]
CS   Immunology and Microbiology, Institute of Medical Biology, University of
      Southern Denmark, DK-5000, Odense C, Denmark
      uholmskov@health.sdu.dk
SO   European Journal of Immunology, (August 2003) Vol. 33, No. 8, pp.
      2327-2336. print.
      ISSN: 0014-2980 (ISSN print).
DT   Article
LA   English
ED   Entered STN: 3 Sep 2003
      Last Updated on STN: 3 Sep 2003
AB   CRP-ductin is a protein expressed mainly by mucosal epithelial cells in
      the mouse. Sequence homologies indicate that CRP-ductin is the mouse
      homologue of human gp-340, a glycoprotein that agglutinates microorganisms
      and binds the lung mucosal collectin surfactant protein-D (SP-D). Here we
      report that purified CRP-ductin binds human SP-D in a calcium-dependent
      manner and that the binding is not inhibited by maltose. The same
      properties have previously been observed for gp-340 binding of SP-D.
      CRP-ductin also showed calcium-dependent binding to both gram-positive and
      -negative bacteria. A polyclonal antibody raised against gp-340 reacted
      specifically with CRP-ductin in Western blots. Immuno-reactivity to
      CRP-ductin was found in the exocrine pancreas, in epithelial cells
      throughout the gastrointestinal tract and in the parotid ducts. A panel
      of RNA preparations from mouse tissues was screened for CRP-ductin and
      SP-D expression by reverse transcription-PCR. The pancreas was the main
      site of synthesis of CRP-ductin, but transcripts were also readily
      amplified from salivary gland, the gastrointestinal tract, liver, testis,
      uterus and lung. Lung was the main site of synthesis of SP-D, but
      transcripts were also amplified from uterus, salivary gland, thymus,
      thyroid gland, pancreas and testis. We conclude that CRP-ductin is the
      mouse homologue of human gp-340 and that its capacity to bind SP-D as well
      as gram-negative and gram-positive bacteria suggests a role in mucosal
      immune defense.

L2   ANSWER 25 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 18

AN   2003:397953 BIOSIS <<LOGINID::20090423>>
DN   PREV200300397953
TI   Expression of deleted in malignant brain tumor-1 (***DMBT1***)
      molecule in biliary epithelium is augmented in hepatolithiasis: Possible
      participation in lithogenesis.
AU   Sasaki, Motoko; Huang, Shiu-Feng; Chen, Miin-Fu; Jan, Yi-Yin; Yeh, Ta-Sen;
      Ishikawa, Akira; ***Mollenhauer, Jan*** ; Poustka, Annemarie;
      Tsuneyama, Koichi; Nimura, Yuji; Oda, Koji; Nakanuma, Yasuni [Reprint
      Author]

CS   Department of Human Pathology, Graduate School of Medicine, Kanazawa
      University, Kanazawa, 920-8640, Japan

DT   Article
LA   English
ED   Entered STN: 27 Aug 2003
      Last Updated on STN: 27 Aug 2003

AB   Deleted in malignant brain tumor-1 (***DMBT1***) is a mucin-like
      molecule participating in mucosal immune defense. Given that bovine
      gallbladder mucin, which accelerates cholesterol crystallization, is a
       DMBT1   homolog,   ***DMBT1***   expression was examined
      immunohistochemically in biliary epithelial cells in livers with
      hepatolithiasis (N=25), primary sclerosing cholangitis (N=7), large bile
      duct obstruction (N=12), and control normal livers (N=10).   ***DMBT1***
      protein was determined in the hepatic bile samples of hepatolithiasis
      (N=12) and other hepatobiliary diseases (N=8) by immunoblot. While
       DMBT1   was faintly expressed in normal livers (20%), it was
      significantly augmented in hepatolithiasis (76%) (P<0.05).   ***DMBT1***
      was mildly expressed in primary sclerosing cholangitis and large bile duct
      obstruction.   ***DMBT1***   protein was detected frequently in hepatic
      bile samples of hepatolithiasis (50%) (P<0.05), but in the other bile
      samples. The percentage of cholesterol in intrahepatic calculi was
      significantly higher in the patients with ***DMBT1*** -positive bile.
      Augmented expression and secretion of ***DMBT1***   in intrahepatic
      large bile ducts in hepatolithiasis suggests its role in lithogenesis.

L2   ANSWER 26 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 19
AN   2003:247369 BIOSIS <<LOGINID::20090423>>
DN   PREV200300247369
TI   Frequent downregulation of ***DMBT1***   and galectin-3 in epithelial
      skin cancer.
AU   ***Mollenhauer, Jan***   [Reprint Author]; Deichmann, Martin; Helmke,
      Burkhard; Mueller, Hanna; Kollender, Gaby; Holmskov, Uffe; Ligtenberg,
      Toon; Krebs, Inge; Wiemann, Stefan; Bantel-Schaal, Ursula; Madsen, Jens;
      Bikker, Floris; Klauck, Sabine M.; Otto, Herwart F.; Moldenhauer, Gerd;
      Poustka, Annemarie

CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
      Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
      j.mollenhauer@dkfz.de

DT   Article
LA   English
ED   Entered STN: 21 May 2003

Last Updated on STN: 21 May 2003
AB   ***DMBT1***   and galectin-3 are potential interacting proteins with
      presumably complex roles in tumorigenesis. While at present a variety of
      mechanisms are discussed for   ***DMBT1***   and its participation in
      cancer, galectin-3 is commonly known to exert tumor-promoting effects.
      However, in vitro studies in a rodent system have suggested that
       DMBT1 /galectin-3 interaction in the ECM triggers epithelial
      differentiation, which would point to tumor-suppressive properties. To
      improve the understanding of   ***DMBT1*** /galectin-3 action in cancer,
      we carried out studies in skin cancer of different origins. Mutational
      analyses of   ***DMBT1***   identified a missense mutation in 1 of 13
      melanoma cell lines. It led to an exchange of an evolutionary conserved
      proline residue for serine and located within the second CUB domain of
       DMBT1 . Immunohistochemical analyses demonstrated absence of
       DMBT1 /galectin-3 expression from melanocytes but induction of
       DMBT1   expression in 1 of 8 nevi and 1 of 11 melanomas and of
      galectin-3 expression in 3 of 8 nevi and 4 of 8 melanomas. These data
      suggest that   ***DMBT1***   and galectin-3 are unlikely to act as
      classical tumor suppressors in melanomas.   ***DMBT1***   and galectin-3
      appear to be secreted to the ECM by epithelial cells within the epidermis
      and the hair follicle. Compared to the flanking normal epidermis, skin
      tumors of epithelial origin frequently displayed downregulation of
       DMBT1   (18 of 19 cases) and galectin-3 (12 of 12 cases). Thus,
      loss of   ***DMBT1*** /galectin-3 expression may play a role in the
      genesis of epithelial skin cancer. This would support the view that
      galectin-3 can exert tumor-suppressive effects in certain scenarios, and
       DMBT1 /galectin-3-mediated differentiation represents a candidate
      mechanism for this effect.

L2   ANSWER 27 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN
AN   2003:584033 BIOSIS <<LOGINID::20090423>>
DN   PREV200300583256
TI   The potential functional dualism of   ***DMBT1*** : Epithelial
      differentiation and pathogen-binding.
AU   ***Mollenhauer, Jan***   [Reprint Author]; Bikker, Floris; Helmke,
      Burkhard; Kollender, Gaby [Reprint Author]; Lyer, Stefan [Reprint Author];
      Renner, Marcus [Reprint Author]; Ligtenberg, Antoon; Madsen, Jens;
      Holmskov, Uffe; Otto, Herwart F.; Poustka, Annemarie [Reprint Author]
CS   Department for Molecular Genome Analysis, Deutsches
      Krebsforschungszentrum, Heidelberg, Germany
SO   International Journal of Molecular Medicine, (2003) Vol. 12, No.
      Supplement 1, pp. S9. print.
      Meeting Info.: 8th World Congress on Advances in Oncology and 6th
      International Symposium on Molecular Medicine. Crete, Greece. October
      16-18, 2003.
      ISSN: 1107-3756 (ISSN print).
DT   Conference; (Meeting)
      Conference; Abstract; (Meeting Abstract)
LA   English
ED   Entered STN: 10 Dec 2003
      Last Updated on STN: 10 Dec 2003

L2   ANSWER 28 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 20
AN   2002:535766 BIOSIS <<LOGINID::20090423>>
DN   PREV200200535766

TI   Identification of the bacteria-binding peptide domain on salivary
      agglutinin (gp-340/ ***DMBT1***), a member of the scavenger receptor
      cysteine-rich superfamily.

AU   Bikker, Floris J. [Reprint author]; Ligtenberg, Antoon J. M.; Nazmi,
      Kamran; Veerman, Enno C. I.; van't Hof, Wim; Bolscher, Jan G. M.; Poustka,
      Annemarie; Amerongen, Arie V. Nieuw; ***Mollenhauer, Jan***
CS   Van der Boechorststraat 7, 1081 BT, Amsterdam, Netherlands
      fj.bikker.obc.acta@med.vu.nl
DT   Article
LA   English
ED   Entered STN: 16 Oct 2002
      Last Updated on STN: 16 Oct 2002
AB   Salivary agglutinin is encoded by ***DMBT1***   and identical to gp-340,
      a member of the scavenger receptor cysteine-rich (SRCR) superfamily.
      Salivary agglutinin/DAMBT1 is known for its Streptococcus mutans
      agglutinating properties. This 300-400 kDa glycoprotein is composed of
      conserved peptide motifs: 14 SRCR domains that are separated by
      SRCR-interspersed domains (SIDs), 2 CUB (C1r/C1s Uegf Bmp1) domains, and a
      zona pellucida domain. We have searched for the peptide domains of
      agglutinin/ ***DMBT1***   responsible for bacteria binding. Digestion
      with endoproteinase Lys-C resulted in a protein fragment containing
      exclusively SRCR and SID domains that binds to S. mutans. To define more
      closely the S. mutans-binding domain, consensus-based peptides of the SRCR
      domains and SIDs were designed and synthesized. Only one of the SRCR
      peptides, designated SRCRP2, and none of the SID peptides bound to S.
      mutans. Strikingly, this peptide was also able to induce agglutination of
      S. mutans and a number of other bacteria. The repeated presence of this
      peptide in the native molecule endows agglutinin/ ***DMBT1***   with a
      general bacterial binding feature with a multivalent character. Moreover,
      our studies demonstrate for the first time that the polymorphic SRCR
      domains of salivary agglutinin/ ***DMBT1***   mediate ligand
      interactions.

L2   ANSWER 29 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 21
AN   2002:497292 BIOSIS <<LOGINID::20090423>>
DN   PREV200200497292
TI   Rare mutations of the ***DMBT1***   gene in human astrocytic gliomas.
AU   Mueller, Wolf; ***Mollenhauer, Jan*** ; Stockhammer, Florian; Poustka,
      Annemarie; von Deimling, Andreas [Reprint author]
CS   Institute for Neuropathology, Charite Humboldt University, D-13353,
      Berlin, Germany
      andreas.von_deimling@charite.de
DT   Article
LA   English
ED   Entered STN: 25 Sep 2002
      Last Updated on STN: 25 Sep 2002
AB   The Deleted in Malignant Brain Tumors 1 gene (***DMBT1***   ) has been
      proposed as a tumor suppressor gene candidate in human brain tumors, based
      on the observation of homozygous deletions affecting the ***DMBT1***
      region or part of the gene. In order to support this hypothesis, we
      performed a mutational analysis of the entire coding region of

DMBT1 , employing SSCP analysis and direct DNA sequencing in a
series of 79 astrocytic gliomas. Five somatic mutations were detected.
Two mutations, one of which resulted in an amino acid exchange, occurred
in glioblastomas. One pilocytic astrocytoma carried two missense
mutations and another pilocytic astrocytoma contained a somatic mutation,
not affecting the presumed protein. In addition, 21 of the 27 single
nucleotide polymorphisms identified in this study have not been recognized
previously. The data indicate, that small mutations are not a frequent
finding in gliomas.

L2   ANSWER 30 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 22
AN   2003:427580 BIOSIS <<LOGINID::20090423>>
DN   PREV200300427580
TI   An integrative model on the role of   ***DMBT1***   in epithelial cancer.
AU   ***Mollenhauer, Jan***   [Reprint Author]; Helmke, Burkhard; Mueller,
      Hanna; Kollender, Gaby; Krebs, Inge; Wiemann, Stefan; Holmskov, Uffe;
      Madsen, Jens; Otto, Herwart F.; Poustka, Annemarie
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
      Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
      j.mollenhauer@dkfz.de
SO   Cancer Detection and Prevention, (2002) Vol. 26, No. 4, pp. 266-274.
      print.
      CODEN: CDPRD4. ISSN: 0361-090X.
DT   Article
LA   English
ED   Entered STN: 17 Sep 2003
      Last Updated on STN: 17 Sep 2003
AB   The gene, deleted in malignant brain tumors 1 (***DMBT1***), has been
      proposed to play a role in brain and epithelial cancer, but shows unusual
      features for a classical tumor suppressor gene. We have proposed that its
      presumptive dual function in protection and differentiation is of
      importance to understand its role in cancer. To gain insights into its
      role in tumorigenesis, we conducted a comprehensive study on   ***DMBT1***
      mutations, expression and location. Twenty-one out of 44 tumors showed
      variable numbers of tandem repeats (VNTRs) due to genetic polymorphism of
        DMBT1 , whereas 11 out of 44 tumors displayed presumable
mutations.
      However, none of the alterations would be predicted to lead to a complete
      inactivation of the gene.   ***DMBT1***   is mucin-like and shows
      tissue-specific expression and secretion, pointing to a function in the
      protection of monolayered epithelia and to an additional function in the
      differentiation of multilayered epithelia. The expression patterns in
      carcinomas arising from the respective structures support this view.
      Accepting this functional dualism gives rise to an initial model on the
      role of   ***DMBT1***   in epithelial cancer.

L2   ANSWER 31 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 23
AN   2002:529538 BIOSIS <<LOGINID::20090423>>
DN   PREV200200529538
TI   The SRCR/SID region of   ***DMBT1***   defines a complex multi-allele
      system representing the major basis for its variability in cancer.
AU   ***Mollenhauer, Jan***   [Reprint author]; Mueller, Hanna; Kollender,
      Gaby; Lyer, Stefan; Diedrichs, Laura; Helmke, Burkhard; Holmskov, Uffe;
      Ligtenberg, Toon; Herbertz, Stephan; Krebs, Inge; Madsen, Jens; Bikker,
      Floris; Schmitt, Liane; Wiemann, Stefan; Scheurlen, Wolfram; Otto, Herwart

F.; von Deimling, Andreas; Poustka, Annemarie
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
        Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
        j.mollenhauer@dkfz.de
DT   Article
LA   English
ED   Entered STN: 16 Oct 2002
        Last Updated on STN: 16 Oct 2002
AB   Deleted in malignant brain tumors 1 (***DMBT1***) at 10q25.3-q26.1 has
        been proposed as a candidate tumor-suppressor gene for brain and
        epithelial cancer.   ***DMBT1***   encodes a multifunctional mucin-like
        protein presumably involved in epithelial differentiation and protection.
        The gene consists of highly homologous and repeating exon and intron
        sequences. This specifically applies to the region coding for the
        repetitive scavenger receptor cysteine-rich (SRCR) domains and
        SRCR-interspersed domains (SIDs) that constitutes the major part of the
        gene. This particular structure may previously have interfered with the
        delineation of   ***DMBT1***   alterations in cancer. Uncovering these,
        however, is of mechanistic importance. By a combined approach, we
        conducted a detailed mutational analysis, starting from a panel of 51
        tumors, including 46 tumor cell lines and five primary tumors.
        Alterations in the repetitive region were present in 22/31 (71%) tumors
        that were investigated in detail. Six tumors showed presumably de novo
        mutations, among these three with point mutations in combination with a
        loss of heterozygosity. However, none of the alterations unambiguously
        would be predicted to lead to an inactivation of   ***DMBT1***   . We
        define seven distinct   ***DMBT1***   alleles based on variable numbers of
        tandem repeats (VNTRs). At least 11 tumors exclusively harbored these
        VNTRs. The data suggest that the SRCR/SID region defines a complex
        multi-allele system that has escaped previous analyses and that represents
        the major basis for the variability of   ***DMBT1***   in cancer.
          DMBT1   thus compares to mucins rather than to conventional tumor
        suppressors.

L2   ANSWER 32 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
        STN   DUPLICATE 24
AN   2002:471853 BIOSIS <<LOGINID::20090423>>
DN   PREV200200471853
TI   Sequential changes of the   ***DMBT1***   expression and location in
        normal lung tissue and lung carcinomas.
AU   ***Mollenhauer, Jan***   [Reprint author]; Helmke, Burkhard; Mueller,
        Hanna; Kollender, Gaby; Lyer, Stefan; Diedrichs, Laura; Holmskov, Uffe;
        Ligtenberg, Toon; Herbertz, Stephan; Krebs, Inge; Wiemann, Stefan; Madsen,
        Jens; Bikker, Floris; Schmitt, Liane; Otto, Herwart F.; Poustka, Annemarie
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
        Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
        j.mollenhauer@dkfz.de
SO   Genes Chromosomes and Cancer, (October, 2002) Vol. 35, No. 2, pp. 164-169.
        print.
        CODEN: GCCAES. ISSN: 1045-2257.
DT   Article
LA   English
ED   Entered STN: 11 Sep 2002
        Last Updated on STN: 11 Sep 2002

AB   Deleted in Malignant Brain Tumors 1 (***DMBT1***) at chromosome region
      10q25.3-q26.1 has been proposed as a candidate tumor-suppressor gene for
      brain, digestive tract, and lung cancer. Recent studies on its expression
      in lung cancer have led to divergent results and have raised a
      controversial discussion. Moreover, ***DMBT1*** has been implicated
      with epithelial protection in the respiratory tract. We thus wondered how
      a loss of its expression could be related to carcinogenesis in the lung.
      To address these issues, we investigated the ***DMBT1*** expression
      and location in the normal lung and lung cancer. By reverse-transcription
      PCR, a down-regulation of the ***DMBT1*** expression in lung cancer
      cell lines is commonly detected. Immunohistochemical studies in situ
      demonstrate that there are also low steady-state levels of ***DMBT1***
      in the normal respiratory epithelium. However, an up-regulation takes
      place in the tumor-flanking epithelium and upon respiratory inflammation.
      Lung carcinomas show increased ***DMBT1*** expression compared to that
      of undiseased lung tissue, but decreased ***DMBT1*** levels compared
      to that of tumor-flanking and inflammatory tissue. A switch from a
      lumenal secretion to a secretion to the extracellular matrix takes place
      during lung carcinogenesis. Our data may resolve the controversial
      discussion on its expression in lung carcinomas. We hypothesize that the
      changes of the ***DMBT1*** expression and location do reflect a time
      course that may point to possible mechanisms for its role in epithelial
      cancer.

L2   ANSWER 33 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN
AN   2002:584258 BIOSIS <<LOGINID::20090423>>
DN   PREV200200584258
TI   ***DMBT1***   and breast cancer.
AU   ***Mollenhauer, Jan***   [Reprint author]; Helmke, Burkhard; Kollender,
      Gaby [Reprint author]; Mueller, Hanna [Reprint author]; Wiemann, Stefan
      [Reprint author]; Holmskov, Uffe; Madsen, Jens; Otto, Herwart F.; Medina,
      Daniel; O'Malley, Bert W.; Poustka, Annemarie [Reprint author]
CS   Department for Molecular Genome Analysis, Deutsches
      Krebsforschungszentrum, Heidelberg, Germany
SO   International Journal of Molecular Medicine, (2002) Vol. 10, No.
      Supplement 1, pp. S82. print.
      Meeting Info.: 7th World Congress on Advances in Oncology and the 5th
      International Symposium on Molecular Medicine. Hersonissos, Crete, Greece.
      October 10-12, 2002.
      ISSN: 1107-3756.
DT   Conference; (Meeting)
      Conference; Abstract; (Meeting Abstract)
LA   English
ED   Entered STN: 13 Nov 2002
      Last Updated on STN: 13 Nov 2002

L2   ANSWER 34 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 25
AN   2002:69136 BIOSIS <<LOGINID::20090423>>
DN   PREV200200069136
TI   Deleted in malignant brain tumors 1 is a versatile mucin-like molecule
      likely to play a differential role in digestive tract cancer.
AU   ***Mollenhauer, Jan*** ; Herbertz, Stephan; Helmke, Burkhard;
      Kollender, Gaby; Krebs, Inge; Madsen, Jens; Holmskov, Uffe; Sorger, Karin;
      Schmitt, Liane; Wiemann, Stefan; Otto, Herwart F.; Groene, Hermann-Josef;
      Poustka, Annemarie [Reprint author]

CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
      Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
AB   Deleted in Malignant Brain Tumors 1 (***DMBT1***) has been proposed as
      a candidate tumor suppressor gene for brain, lung, and digestive tract
      cancer. In particular, alterations of the gene and/or a loss of
      expression have been observed in gastric, colorectal, and esophageal
      carcinomas. Initial evidence has accumulated that ***DMBT1***   may
      represent a multifunctional protein. Because the consequences of a loss
      of ***DMBT1***   function may be different depending on its original
      function in a particular tissue, we wondered if it is appropriate to
      assume a uniform role for ***DMBT1***   in digestive tract carcinomas.
      We hypothesized that a systematic characterization of ***DMBT1***   in
      the human alimentary tract would be useful to improve the understanding of
      this molecule and its role in digestive tract carcinomas. Our data
      indicate that the expression pattern and subcellular distribution of
       DMBT1   in the human alimentary tract is reminiscent of epithelial
      mucins. Bovine gallbladder mucin is identified as the ***DMBT1***
      homologue in cattle. An elaborate alternative splicing may generate a
      great variety of ***DMBT1***   isoforms. Monolayered epithelia display
      transcripts of 6 kb and larger, and generally show a lumenal secretion of
       DMBT1   indicating a role in mucosal protection. The esophagus is
      the only tissue displaying an additional smaller transcript of apprx5 kb.
      The stratified squamous epithelium of the esophagus is the only epithelium
      showing a constitutive targeting of ***DMBT1***   to the extracellular
      matrix (ECM) suggestive of a role in epithelial differentiation. Squamous
      cell carcinomas of the esophagus show an early loss of ***DMBT1***
      expression. In contrast, adenocarcinomas of the esophagus commonly
      maintain higher ***DMBT1***   expression levels. However, presumably
      subsequent to a transition from the lumenal secretion to a targeting to
      the ECM, a loss of ***DMBT1***   expression also takes place in
      adenocarcinomas. Regarding ***DMBT1***   as a mucin-like molecule is a
      new perspective that is instructive for its functions and its role in
      cancer. We conclude that ***DMBT1***   is likely to play a differential
      role in the genesis of digestive tract carcinomas. However, although
       DMBT1   originally has divergent functions in monolayered and
      multilayered epithelia, carcinogenesis possibly converges in a common
      pathway that requires an inactivation of its functions in the ECM.

AU   ***Mollenhauer, Jan***   [Reprint author]; Helmke, Burkhard; Mueller,
      Hanna [Reprint author]; Kollender, Gaby [Reprint author]; Herbertz, Stefan
      [Reprint author]; Krebs, Inge [Reprint author]; Wiemann, Stefan [Reprint
      author]; Holmskov, Uffe; Madsen, Jens; Otto, Herwart F.; Poustka,
      Annemarie [Reprint author]
CS   Department for Molecular Genome Analysis, Deutsches

Krebsforschungszentrum, Im Neuenheimer Feld 280, 69120, Heidelberg,
Germany
SO   International Journal of Molecular Medicine, (2001) Vol. 8, No. Supplement
     1, pp. S9. print.
     Meeting Info.: 6th World Congress on Advances in Oncology, and the 4th
     International Symposium on Molecular Medicine. Hersonissos, Crete, Greece.
     October 18-20, 2001.
     ISSN: 1107-3756.
DT   Conference; (Meeting)
     Conference; Abstract; (Meeting Abstract)
LA   English
ED   Entered STN: 12 Dec 2001
     Last Updated on STN: 25 Feb 2002

L2   ANSWER 36 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
     STN   DUPLICATE 26
AN   2000:188628 BIOSIS <<LOGINID::20090423>>
DN   PREV200000188628
TI   ***DMBT1***   encodes a protein involved in the immune defense and in
     epithelial differentiation and is highly unstable in cancer.
AU   ***Mollenhauer, Jan***   [Reprint author]; Herbertz, Stephan; Holmskov,
     Uffe; Tolnay, Markus; Krebs, Inge; Merlo, Adrian; Schroder, Henrik Daa;
     Maier, Daniel; Breitling, Frank; Wiemann, Stefan; Groene, Hermann-Josef;
     Poustka, Annemarie
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
     Im Neuenheimer Feld 280, Kst. H0600, 69120, Heidelberg, Germany
SO   Cancer Research, (March 15, 2000) Vol. 60, No. 6, pp. 1704-1710. print.
     CODEN: CNREA8. ISSN: 0008-5472.
DT   Article
LA   English
ED   Entered STN: 11 May 2000
     Last Updated on STN: 4 Jan 2002
AB   The gene deleted in malignant brain tumors 1 (***DMBT1***) has been
     proposed as a candidate tumor suppressor for brain, gastrointestinal, and
     lung cancer. It codes for a protein of unknown function belonging to the
     superfamily of scavenger receptor cysteine-rich proteins. We aimed at
     getting insights into the functions of ***DMBT1***   by expression
     analyses and studies with a monoclonal antibody against the protein. The
       DMBT1   mRNA is expressed throughout the immune system, and Western
     blot studies demonstrated that isoforms of ***DMBT1***   are identical
     to the collectin-binding protein gp-340, a glycoprotein that is involved
     in the respiratory immune defense. Immunohistochemical analyses revealed
     that ***DMBT1***   is produced by both tumor-associated macrophages and
     tumor cells and that it is deregulated in glioblastoma multiforme in
     comparison to normal brain tissue. Our data further suggest that the
     proteins CRP-ductin and hensin, both of which have been implicated in
     epithelial differentiation, are the ***DMBT1***   orthologs in mice and
     rabbits, respectively. These findings and the spatial and temporal
     distribution of ***DMBT1***   in fetal and adult epithelia suggest that
       DMBT1   further plays a role in epithelial development.
     Rearrangements of ***DMBT1***   were found in 16 of 18 tumor cell lines,
     and hemizygous deletions were observed in a subset of normal individuals,
     indicating that the alterations in tumors may be a result of both
     pre-existing deletions uncovered by a loss of heterozygosity and secondary
     changes acquired during tumorigenesis. Thus, ***DMBT1***   is a gene
     that is highly unstable in cancer and encodes for a protein with at least
     two different functions, one in the immune defense and a second one in

epithelial differentiation.

L2   ANSWER 37 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
        STN   DUPLICATE 27
AN   2000:368358 BIOSIS <<LOGINID::20090423>>
DN   PREV200000368358
TI   Comprehensive allelotype and genetic analysis of 466 human nervous system
        tumors.
AU   von Deimling, Andreas [Reprint author]; Fimmers, Rolf; Schmidt, Matthias
        C.; Bender, Bernhard; Fassbender, Frank; Nagel, Judith; Jahnke, Rolf;
        Kaskel, Peter; Duerr, Eva-Maria; Koopmann, Jens; Maintz, David; Steinbeck,
        Stephanie; Wick, Wolfgang; Platten, Michael; Mueller, Daniel J.; Przkora,
        Rene; Waha, Andreas; Bluemcke, Britta; Wellenreuther, Ruth;
        Meyer-Puttlitz, Birgit; Schmidt, Ortrud;   ***Mollenhauer, Jan*** ;
        Poustka, Annemarie; Stangl, Armin P.; Lenartz, Doris; von Ammon, Klaus;
        Henson, John W.; Schramm, Johannes; Louis, David N.; Wiestler, Otmar D.
CS   Institut fuer Neuropathologie, Charite Humboldt University, Augustenburger
        Platz 1, Campus Virchow Klinikum, D-13353, Berlin, Germany
SO   Journal of Neuropathology and Experimental Neurology, (June, 2000) Vol.
        59, No. 6, pp. 544-558. print.
        CODEN: JNENAD. ISSN: 0022-3069.
DT   Article
LA   English
ED   Entered STN: 23 Aug 2000
        Last Updated on STN: 8 Jan 2002
AB   Brain tumors pose a particular challenge to molecular oncology. Many
        different tumor entities develop in the nervous system and some of them
        appear to follow distinct pathogenic routes. Molecular genetic
        alterations have increasingly been reported in nervous system neoplasms.
        However, a considerable number of affected genes remain to be identified.
        We present here a comprehensive allelotype analysis of 466 nervous system
        tumors based on loss of heterozygosity (LOH) studies with 129
        microsatellite markers that span the genome. Specific alterations of the
        EGFR, CDK4, CDKN2A, TP53,   ***DMBT1*** , NF2, and PTEN genes were
        analyzed in addition. Our data point to several novel genetic loci
        associated with brain tumor development, demonstrate relationships between
        molecular changes and histopathological features, and further expand the
        concept of molecular tumor variants in neuro-oncology. This catalogue may
        provide a valuable framework for future studies to delineate molecular
        pathways in many types of human central nervous system tumors.

L2   ANSWER 38 OF 41 CAPLUS COPYRIGHT 2009 ACS on STN
AN   1999:811566 CAPLUS <<LOGINID::20090423>>
DN   132:45802
TI   Nonhuman mammal with inactivated or inactivatable SCUZ protein gene
IN   ***Mollenhauer, Jan*** ; Poustka, Annemarie; Krebs, Inge
PA   Deutsches Krebsforschungszentrum Stiftung des Oeffentlichen Rechts,
        Germany
SO   Ger., 14 pp.
        CODEN: GWXXAW
DT   Patent
LA   German
FAN.CNT 1
        PATENT NO.   KIND   DATE   APPLICATION NO.   DATE
        ---------------   ----   --------   --------------------   --------
PI   DE 19829660   C1   19991223   DE 1998-19829660   19980702
        WO 2000001814   A2   20000113   WO 1999-DE2055   19990630

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     WO 2000001814       A3     20000420
       W:  AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DK,
           EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
           KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW,
           MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR,
           TT, UA, UG, US, UZ, VN, YU, ZW
      RW:  GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
           ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
           CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     AU 9958478         A      20000124   AU 1999-58478           19990630
PRAI DE 1998-19829660   A      19980702
     WO 1999-DE2055     W      19990630
```

AB   The title transgenic mammal is disclosed. SCUZ proteins contain an SRCR
      (scavenger receptor cysteine-rich) domain and protein interaction domains
      CUB and ZP. The gene may the   ***DMBT1***   gene, or may encode CRP
      ductin or ebnerin. These transgenic mammals may be used to screen for
      carcinoma inhibitors. Thus, a transgenic mouse contg. a Cre
      recombinase-inactivatable CRP ductin gene was created.
RE.CNT 1   THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2   ANSWER 39 OF 41 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 28
AN   1999:468769 BIOSIS <<LOGINID::20090423>>
DN   PREV199900468769
TI   Cloning of gp-340, a putative opsonin receptor for lung surfactant protein
      D.
AU   Holmskov, Uffe [Reprint author];   ***Mollenhauer, Jan***   ; Madsen, Jens;
      Vitved, Lars; Gronlund, Jorn; Tornoe, Ida; Kliem, Anette; Reid, Kenneth B.
      M.; Poustka, Annemarie; Skjodt, Karsten
CS   Department of Immunology and Microbiology, Institute of Medical Biology,
      University of Southern Denmark, Winslowparken 19.1, DK-5000, Odense,
      Denmark
SO   Proceedings of the National Academy of Sciences of the United States of
      America, (Sept. 14, 1999) Vol. 96, No. 19, pp. 10794-10799. print.
      CODEN: PNASA6. ISSN: 0027-8424.
DT   Article
LA   English
ED   Entered STN: 9 Nov 1999
      Last Updated on STN: 9 Nov 1999
AB   Surfactant protein D (SP-D) is an oligomeric C type lectin that promotes
      phagocytosis by binding to microbial surface carbohydrates. A 340-kDa
      glycoprotein (gp-340) has been shown to bind SP-D in the presence of
      calcium but does so independently of carbohydrate recognition. This
      protein exists both in a soluble form and in association with the
      membranes of alveolar macrophages. The primary structure of gp-340 has
      been established by molecular cloning, which yielded a 7,686-bp cDNA
      sequence encoding a polypeptide chain of 2,413 amino acids. The domain
      organization features 13 scavenger receptor cysteine-rich (SRCR) domains,
      each separated by an SRCR-interspersed domain, except for SRCRs 4 and 5,
      which are contiguous. The 13 SRCR domains are followed by two C1r/C1s
      Uegf Bmp1 domains separated by a 14th SRCR domain and a zona pellucida
      domain. gp-340 seems to be an alternative spliced form of   ***DMBT1***   .
      Reverse transcription-PCR analysis showed that the main sites of synthesis
      of gp-340 are lung, trachea, salivary gland, small intestine, and stomach.
      Immunohistochemistry revealed strong staining for gp-340 in alveolar and
      other tissue macrophages. Immunostaining of the macrophage membrane was

either uniform or focal in a way that suggested capping, whereas other
macrophages showed strong intracellular staining within the
phagosome/phagolysosome compartments. In some macrophages, SP-D and
gp-340 were located in the same cellular compartment. Immunoreactive
gp-340 was also found in epithelial cells of the small intestine and in
the ducts of salivary glands. The distribution of gp-340 in macrophages
is compatible with a role as an opsonin receptor for SP-D.

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L2    ANSWER 40 OF 41  CAPLUS  COPYRIGHT 2009 ACS on STN
AN    1998:493676  CAPLUS <<LOGINID::20090423>>
DN    129:120695
OREF  129:24702a
TI    A protein containing a scavenger receptor cytosine-rich domain of human
      fetal lung and a cDNA encoding it
IN    ***Mollenhauer, Jan***  ; Poustka, Annemarie
PA    Deutsches Krebsforschungszentrum Stiftung des Offentlichen Rechts,
      Germany; Mollenhauer, Jan; Poustka, Annemarie
SO    PCT Int. Appl., 55 pp.
      CODEN: PIXXD2
DT    Patent
LA    German
FAN.CNT 1
      PATENT NO.          KIND   DATE       APPLICATION NO.        DATE
      ---------------     ----   --------   --------------------   --------
PI    WO 9830687          A2     19980716   WO 1998-DE96           19980109
      WO 9830687          A3     19980911
         W:  JP, US
         RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
      DE 19730997         C1     19980924   DE 1997-19730997       19970718
      EP 1015583          A2     20000705   EP 1998-905246         19980109
      EP 1015583          B1     20051019
         R:  AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE
      JP 2001509667       T      20010724   JP 1998-530469         19980109
      AT 307201           T      20051115   AT 1998-905246         19980109
      US 6346606          B1     20020212   US 1999-341587         19990831
PRAI  DE 1997-19700519    A      19970109
      DE 1997-19730997    A      19970718
      WO 1998-DE96        W      19980109
AB    A protein contg. a scavenger receptor cytosine-rich domain is identified
      in human fetal lung and a cDNA encoding it is cloned.  The cDNA was cloned
      from a human fetal lung library by PCR.  A partial cDNA was obtained by
      PCR using primers recognizing SRCR and CUB1 domain coding sequences.  The
      gene shows deletions in brain tumors.

L2    ANSWER 41 OF 41  BIOSIS  COPYRIGHT (c) 2009 The Thomson Corporation  on
      STN                                            DUPLICATE 29
AN    1997:439001  BIOSIS <<LOGINID::20090423>>
DN    PREV199799738204
TI    ***DMBT1***  , a new member of the SRCR superfamily, on chromosome
      10q25.3-26.1 is deleted in malignant brain tumours.
AU    ***Mollenhauer, Jan***  ; Wiemann, Stefan; Scheurlen, Wolfram; Korn,
      Bernhard; Hayashi, Yutaka; Wilgenbug, Klaus K.; Von Deimling, Andreas;
      Poustka, Annemarie [Reprint author]
CS    Div. Molecular Genome Analysis, Deutsches Krebsforschungszentrum, Im
      Neuenheimer Feld 280, D-69120 Heidelberg, Germany
SO    Nature Genetics, (1997) Vol. 17, No. 1, pp. 32-39.
      ISSN: 1061-4036.
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DT    Article
LA    English
ED    Entered STN: 8 Oct 1997
      Last Updated on STN: 8 Oct 1997
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AB    Loss of sequences from human chromosome 10q has been associated with the
      progression of human cancer.  Medulloblastoma and glioblastoma multiforme
      are the most common malignant brain tumours in children and adults,
      respectively.  In glioblastoma multiforme, the most aggressive form, 80%
      of the tumours show loss of 10q.  We have used representational difference
      analysis to identify a homozygous deletion at 10q25.3-26.1 in a
      medulloblastoma cell line and have cloned a novel gene,  ***DMBT1***  ,
      spanning this deletion.    ***DMBT1***   shows homology to the scavenger
      receptor cysteine-rich (SRCR) superfamily.  Intragenic homozygous
      deletions have been detected in 2/20 medulloblastomas and in 9/39
      glioblastomas multiformes.  Lack of   ***DMBT1***   expression has been
      demonstrated in 4/5 brain-tumour cell lines.  We suggest that
        ***DMBT1***   is a putative tumour-suppressor gene implicated in the
      carcinogenesis of medulloblastoma and glioblastoma multiforme.
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```
=> e end caroline/au
E1          2     END C M/AU
E2          3     END C S/AU
E3         29 --> END CAROLINE/AU
E4          2     END CHERYL S/AU
E5          1     END CHRIS/AU
E6          4     END CHRISTOPHER/AU
E7        104     END D/AU
E8          1     END D E/AU
E9         89     END D W/AU
E10         9     END DAVE/AU
E11         6     END DAVE W/AU
E12        19     END DAVID/AU

=> s e1-e3 and Dmbt?
L3         29 ("END C M"/AU OR "END C S"/AU OR "END CAROLINE"/AU) AND DMBT?

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4         11 DUP REM L3 (18 DUPLICATES REMOVED)

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 11 ANSWERS - CONTINUE? Y/(N):y

L4   ANSWER 1 OF 11  CAPLUS  COPYRIGHT 2009 ACS on STN DUPLICATE 1
AN   2009:402136  CAPLUS <<LOGINID::20090423>>
DN   150:327861
TI    ***DMBT1***   functions as pattern-recognition molecule for
     poly-sulfated and poly-phosphorylated ligands
AU     ***End, Caroline***  ; Bikker, Floris; Renner, Marcus; Bergmann, Gaby;
     Lyer, Stefan; Blaich, Stephanie; Hudler, Melanie; Helmke, Burkhard;
     Gassler, Nikolaus; Autschbach, Frank; Ligtenberg, Antoon J. M.; Benner,
     Axel; Holmskov, Uffe; Schirmacher, Peter; Nieuw Amerongen, Arie V.;
     Rosenstiel, Philip; Sina, Christian; Franke, Andre; Hafner, Mathias;
     Kioschis, Petra; Schreiber, Stefan; Poustka, Annemarie; Mollenhauer, Jan
CS   Division of Molecular Genome Analysis, German Cancer Research Center,
     Heidelberg, Germany
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AB   Deleted in malignant brain tumors 1 (***DMBT1***) is a secreted
      glycoprotein displaying a broad bacterial-binding spectrum. Recent
      functional and genetic studies linked   ***DMBT1***   to the suppression
      of LPS-induced TLR4-mediated NF-.kappa.B activation and to the
      pathogenesis of Crohn's disease. Here, the authors aimed at unraveling
      the mol. basis of its function in mucosal protection and of its broad
      pathogen-binding specificity. The authors report that   ***DMBT1***
      directly interacts with dextran sulfate sodium (DSS) and carrageenan, a
      structurally similar sulfated polysaccharide, which is used as a
      texturizer and thickener in human dietary products. However, binding of
        DMBT1   does not reduce the cytotoxic effects of these agents to
      intestinal/epithelial cells in vitro. DSS and carrageenan compete for
        DMBT1 -mediated bacterial aggregation via interaction with its
      bacterial-recognition motif. Competition and ELISA studies identify
      poly-sulfated and poly-phosphorylated structures as ligands for this
      recognition motif, such as heparan sulfate, LPS, and lipoteichoic acid.
      Dose-response studies in   ***Dmbt1*** -/- and   ***Dmbt1*** +/+ mice
      utilizing the DSS-induced colitis model demonstrate a differential
      response only to low but not to high DSS doses. The authors propose that
        DMBT1   functions as pattern-recognition mol. for poly-sulfated and
      poly-phosphorylated ligands providing a mol. basis for its broad
      bacterial-binding specificity and its inhibitory effects on LPS-induced
      TLR4-mediated NF-.kappa.B activation.

TI   Regulation of   ***DMBT1***   via NOD2 and TLR4 in intestinal epithelial
      cells modulates bacterial recognition and invasion.
AU   Rosenstiel, Philip; Sina, Christian;   ***End, Caroline*** ; Renner,
      Marcus; Lyer, Stefan; Till, Andreas; Hellmig, Stephan; Nikolaus, Susanna;
      Foelsch, Ulrich R.; Helmke, Burkhard; Autschbach, Frank; Schirmacher,
      Peter; Kioschis, Petra; Hafner, Mathias; Poustka, Annemarie; Mollenhauer,
      Jan; Schreiber, Stefan [Reprint Author]
CS   Univ Hosp Schleswig Holstein, Inst Clin Mol Biol, Campus
      Kiel,Schittenhelmstrache 12, Kiel, Germany
      s.schreiber@mucosa.de
AB   Mucosal epithelial cell layers are constantly exposed to a complex
      resident microflora. Deleted in malignant brain tumors 1 (***DMBT1***
) belongs to the group of secreted scavenger receptor cysteine-rich
      proteins and is considered to be involved in host defense by pathogen
      binding. This report describes the regulation and function of
        DMBT1   in intestinal epithelial cells, which form the primary
      immunological barrier for invading pathogens. We report that intestinal
      epithelial cells up-regulate   ***DMBT1***   upon proinflammatory stimuli

(e.g., TNF-alpha, LPS). We demonstrate that   ***DMBT1***   is a target
gene for the intracellular pathogen receptor NOD2 via NF-kappa B
activation.   ***DMBT1***   is strongly up-regulated in the inflamed
intestinal mucosa of Crohn's disease patients with wild-type, but not with
mutant NOD2. We show that   ***DMBT1***   inhibits cytoinvasion of
Salmonella enterica and LPS- and muramyl dipeptide-induced NF-kappa B
activation and cytokine secretion in vitro. Thus,   ***DMBT1***   may
play an important role in the first line of mucosal defense conferring
immune exclusion of bacterial cell wall components. Dysregulated
intestinal   ***DMBT1***   expression due to mutations in the NOD2/CARD15
gene may be part of the complex pathophysiology of barrier dysfunction in
Crohn's disease.

L4   ANSWER 3 OF 11 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 3
AN   2008:112593 BIOSIS <<LOGINID::20090423>>
DN   PREV200800114726
TI   ***DMBT1***   confers mucosal protection in vivo and a deletion variant
      is associated with Crohn's disease.
AU   Renner, Marcus; Bergmann, Gaby; Krebs, Inge;   ***End, Caroline***   ;
      Lyer, Stefan; Hilberg, Frank; Helmke, Burkhard; Gassler, Nikolaus;
      Autschbach, Frank; Bikker, Floris; Strobel-Freidekind, Olga; Gronert-Sum,
      Sabine; Benner, Axel; Blaich, Stephanie; Wittig, Rainer; Hudler, Melanie;
      Ligtenberg, Antoon J.; Madsen, Jens; Holmskov, Uffe; Annese, Vito;
      Latiano, Anna; Schirmacher, Peter; Amerongen, Arie V. Nieuw; D'Amato,
      Mauro; Kioschis, Petra; Hafner, Mathias; Poustka, Annemarie; Mollenhauer,
      Jan [Reprint Author]
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, Neuenheimer Feld 280,
      D-69120 Heidelberg, Germany
      j.mollenhauer@dkfz.de
SO   Gastroenterology, (NOV 2007) Vol. 133, No. 5, pp. 1499-1509.
      CODEN: GASTAB. ISSN: 0016-5085.
DT   Article
LA   English
ED   Entered STN: 13 Feb 2008
      Last Updated on STN: 13 Feb 2008
AB   Background & Aims: Impaired mucosal. defense plays an important role in
      the pathogenesis of Crohn's disease (CD), one of the main subtypes of
      inflammatory bowel disease (IBD). Deleted in malignant brain tumors 1(
        DMBT1) is a secreted scavenger receptor cysteine-rich protein
with
      predominant expression in. the intestine and has been proposed to exert
      possible functions in regenerative processes and pathogen defense. Here,
      we aimed at analyzing the role of   ***DMBT1***   in IBD. Methods: We
      studied   ***DMBT1***   expression in IBD and normal tissues by
      quantitative reverse transcription-polymerase chain reaction,
      immunohistochemistry, and mRNA in situ hybridization. Genetic
      polymorphisms within   ***DMBT1***   were analyzed in an Italian IBD
      case-control sample.   ***Dmbt1***   (-/-) mice were generated,
      characterized, and analyzed for their susceptibility to dextran sulfate
      sodium-induced colitis. Results: ***DMBT1***   levels correlate with
      disease activity in inflamed IBD tissues. A highly significant fraction
      of the patients with IBD displayed up-regulation of   ***DMBT1***
      specifically in the intestinal epithelial surface cells and Paneth cells.
      A deletion allele of   ***DMBT1***   with a reduced: number of scavenger
      receptor cysteine-rich domain coding exons is associated with an increased
      risk of CD (P =.00056; odds ratio, 1.75) but not for ulcerative colitis.

Dmbt1 (-/-) mice display enhanced susceptibility to dextran
sulfate
    sodium-induced colitis and elevated Tnf, Il6, and Nod2 expression levels
    during inflammation. Conclusions: ***DMBT1*** may play a role in
    intestinal mucosal protection and prevention of inflammation. Impaired
      DMBT1   function may contribute to the pathogenesis of CD.

L4   ANSWER 4 OF 11 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
     DUPLICATE 4
AN   2007:601740 BIOSIS <<LOGINID::20090423>>
DN   PREV200700605050
TI   ***Dmbt1*** is a target gene of NOD2/CARD15 and protects intestinal
     epithelial cells from bacterial invasion.
AU   Rosenstiel, Philip; Sina, Christian; Hellmig, Stephan; Nikolaus, Susanna;
       End, Caroline ; Renner, Markus; Lyer, Stephan; Helmke, Burkhard;
     Hafner, Mathias; Poustka, Annemarie; Mollenhauer, Jan; Schreiber, Stefan
SO   Gastroenterology, (APR 2007) Vol. 132, No. 4, Suppl. 2, pp. A550.
     Meeting Info.: Digestive Disease Week Meeting/108th Annual Meeting of the
     American-Gastroenterological-Association. Washington, DC, USA. May 19 -24,
     2007. Amer Gastroenterol Assoc; Amer Assoc Study Liver Dis; Amer Soc
     Gastrointestinal Endoscopy; Soc Surg Alimentary Tract.
     CODEN: GASTAB. ISSN: 0016-5085.
DT   Conference; (Meeting)
     Conference; Abstract; (Meeting Abstract)
LA   English
ED   Entered STN: 6 Dec 2007
     Last Updated on STN: 6 Dec 2007
AB   Background&Aims: Mucosal epithelial cell layers are constantly exposed to
     a complex resident microflora. ***DMBT1*** (deleted in malignant
     brain tumors 1) belongs to the group of secreted scavenger receptor
     cysteine-rich (SRCR) proteins and is considered to be involved in host
     defense by pathogen binding. This report describes the regulation and
     function of ***DMBT1*** in intestinal epithelial cells, which form the
     primary immunological barrier for invading pathogens.Methods:Expression of
       DMBT1   was determined by Taqman real time PCR, Western blot and
     immunohistochemistry. Promotorstudies were performed using luciferase
     reporter gene experiments. Bacterial invasion was tested by gentamicin
     protection assay and siRNA approaches. Results: We demonstrate that
       DMBT1   is a target gene for the intracellular pathogen receptor
     NOD2 via NF-KB activation, ***DMBT1*** is strongly upregulated in the
     inflamed intestinal mucosa of Crohn disease patients with wild-type, but
     not with mutant NOD2. We show that ***DMBT1*** inhibits cytoinvasion
     of Salmonella enterica and LPS-induced Toll-like receptor 4 signalling.
     Silencing of ***DMBT1*** in intestinal epithelial cells leads to an
     increased invasion of bacteria. Conclusions: ***DMBT1*** may play an
     important role in the first line of mucosal defense conferring immune
     exclusion of bacterial cell wall components. Dysregulated intestinal
       DMBT1   expression due to mutations in the NOD2/CARD15 gene may be
     part of the complex pathophysiology of barrier dysfunction in Crohn
     disease.

L4   ANSWER 5 OF 11 SCISEARCH COPYRIGHT (c) 2009 The Thomson Corporation on
     STN
AN   2007:343766 SCISEARCH <<LOGINID::20090423>>
GA   The Genuine Article (R) Number: 142JH
TI   Respiratory ***DMBT1*** levels increase during lung maturation and
     infection and modulate surfactant function

AU   Mueller, Hanna (Reprint);   ***End, Caroline*** ; Weiss, Christel;
      Renner, Marcus; Mollenhauer, Jan; Linderkamp, Otwin
CS   Univ Heidelberg, Div Neonatol, Dept Pediat, D-6900 Heidelberg, Germany;
      Deutsch Krebsforschungszentrum, Div Mol Genome Anal, D-6900 Heidelberg,
      Germany; Univ Hosp Mannheim, Inst Med Sci, Mannheim, Germany
CYA   Germany
SO   EUROPEAN JOURNAL OF PEDIATRICS, (MAR 2007) Vol. 166, No. 3, pp. 279-279.
      ISSN: 0340-6199.
PB   SPRINGER, 233 SPRING STREET, NEW YORK, NY 10013 USA.
DT   Conference; Journal
LA   English
REC   Reference Count: 0
ED   Entered STN: 5 Apr 2007
      Last Updated on STN: 5 Apr 2007

L4   ANSWER 6 OF 11   MEDLINE on STN   DUPLICATE 5
AN   2007767353   MEDLINE <<LOGINID::20090423>>
DN   PubMed ID: 17908325
TI   Deleted in Malignant Brain Tumors 1 (***DMBT1***) is present in
      hyaline membranes and modulates surface tension of surfactant.
AU   Muller Hanna;   ***End Caroline*** ; Renner Marcus; Helmke Burkhard M;
      Gassler Nikolaus; Weiss Christel; Hartl Dominik; Griese Matthias; Hafner
      Mathias; Poustka Annemarie; Mollenhauer Jan; Poeschl Johannes
CS   Division of Neonatology, Department of Pediatrics, University of
      Heidelberg, Im Neuenheimer Feld 153, 69120 Heidelberg, Germany..
      Hanna.Mueller@med.uni-heidelberg.de
SO   Respiratory research, (2007) Vol. 8, pp. 69. Electronic Publication:
      2007-10-01.
      Journal code: 101090633. E-ISSN: 1465-993X.
      Report No.: NLM-PMC2164949.
CY   England: United Kingdom
DT   Journal; Article; (JOURNAL ARTICLE)
LA   English
FS   Priority Journals
EM   200801
ED   Entered STN: 29 Dec 2007
      Last Updated on STN: 24 Jan 2008
      Entered Medline: 23 Jan 2008
AB   BACKGROUND: Deleted in Malignant Brain Tumors 1 (***DMBT1***) is a
      secreted scavenger receptor cysteine-rich protein that binds various
      bacteria and is thought to participate in innate pulmonary host defense.
      We hypothesized that pulmonary ***DMBT1*** could contribute to
      respiratory distress syndrome in neonates by modulating surfactant
      function. METHODS: ***DMBT1*** expression was studied by
      immunohistochemistry and mRNA in situ hybridization in post-mortem lungs
      of preterm and full-term neonates with pulmonary hyaline membranes. The
      effect of human recombinant ***DMBT1*** on the function of bovine and
      porcine surfactant was measured by a capillary surfactometer.
         DMBT1 -levels in tracheal aspirates of ventilated preterm and term
      infants were determined by ELISA. RESULTS: Pulmonary ***DMBT1*** was
      localized in hyaline membranes during respiratory distress syndrome. In
      vitro addition of human recombinant ***DMBT1*** to the surfactants
      increased surface tension in a dose-dependent manner. The ***DMBT1***
      -mediated effect was reverted by the addition of calcium depending on the
      surfactant preparation. CONCLUSION: Our data showed pulmonary
         DMBT1 expression in hyaline membranes during respiratory distress
      syndrome and demonstrated that ***DMBT1*** increases lung surface

tension in vitro. This raises the possibility that ***DMBT1*** could antagonize surfactant supplementation in respiratory distress syndrome and could represent a candidate target molecule for therapeutic intervention in neonatal lung disease.

L4   ANSWER 7 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN
AN   2007:1398177 CAPLUS <<LOGINID::20090423>>
DN   148:446649
TI   Deleted in Malignant Brain Tumors 1 (***DMBT1***) is present in hyaline membranes and modulates surface tension of surfactant
AU   Mueller, Hanna; ***End, Caroline*** ; Renner, Marcus; Helmke, Burkhard M.; Gassler, Nikolaus; Weiss, Christel; Hartl, Dominik; Griese, Matthias; Hafner, Mathias; Poustka, Annemarie; Mollenhauer, Jan; Poeschl, Johannes
CS   Division of Neonatology, Department of Pediatrics, University of Heidelberg, Heidelberg, 69120, Germany
SO   Respiratory Research (2007), 8(1), No pp. given
      CODEN: RREEBZ; ISSN: 1465-993X
      URL: http://respiratory-research.com/content/pdf/1465-9921-8-69.pdf
PB   BioMed Central Ltd.
DT   Journal; (online computer file)
LA   English
AB   Background: Deleted in Malignant Brain Tumors 1 (***DMBT1***) is a secreted scavenger receptor cysteine-rich protein that binds various bacteria and is thought to participate in innate pulmonary host defense. The authors hypothesized that pulmonary ***DMBT1*** could contribute to respiratory distress syndrome in neonates by modulating surfactant function. Methods: ***DMBT1*** expression was studied by immunohistochem. and mRNA in situ hybridization in post-mortem lungs of preterm and full-term neonates with pulmonary hyaline membranes. The effect of human recombinant ***DMBT1*** on the function of bovine and porcine surfactant was measured by a capillary surfactometer.
        DMBT1 -levels in tracheal aspirates of ventilated preterm and term infants were detd. by ELISA. Results: Pulmonary ***DMBT1*** was localized in hyaline membranes during respiratory distress syndrome. In vitro addn. of human recombinant ***DMBT1*** to the surfactants increased surface tension in a dose-dependent manner. The ***DMBT1*** -mediated effect was reverted by the addn. of calcium depending on the surfactant prepn. Conclusions: The data showed pulmonary ***DMBT1*** expression in hyaline membranes during respiratory distress syndrome and demonstrated that ***DMBT1*** increases lung surface tension in vitro. This raises the possibility that ***DMBT1*** could antagonize surfactant supplementation in respiratory distress syndrome and could represent a candidate target mol. for therapeutic intervention in neonatal lung disease.
RE.CNT 41   THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4   ANSWER 8 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN
AN   2005:953991 CAPLUS <<LOGINID::20090423>>
DN   143:260332
TI   Use of ***DMBT1***   protein for capturing sulfate and phosphate groups exposed in disease-associated agents
IN   Mollenhauer, Jan; ***End, Caroline*** ; Blaich, Stephanie; Bergmann, Gaby; Renner, Marcus; Lyer, Stefan; Wittig, Rainer; Poustka, Annemarie; Bikker, Floris; Ligtenberg, Anton; Nieuw-Amerongen, Arie; Veerman, Enno
PA   Deutsches Krebsforschungszentrum Stiftung des Oeffentlichen Rechts, Germany

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	EP 1568374	A1	20050831	EP 2004-4281	20040225

       R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
           IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

| | WO 2005079834 | A1 | 20050901 | WO 2005-EP1994 | 20050225 |
| | WO 2005079834 | A9 | 20051027 | | |

       W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
           CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
           GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
           LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
           NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
           TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
     RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
           AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
           EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
           RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
           MR, NE, SN, TD, TG

| | EP 1727558 | A1 | 20061206 | EP 2005-732131 | 20050225 |

       R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
           IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR

	US 20080234185	A1	20080925	US 2006-590657	20060825
PRAI	EP 2004-4281	A	20040225		
	WO 2005-EP1994	W	20050225		

AB   Disclosed is the use of ***DMBT1*** , or of the nucleic acid encoding
      it, for the manuf. of a medicament for the treatment of a patient
      suffering from a disease caused by an agent which possesses at least one
      accessible sulfate and/or at least one accessible phosphate group.
        DMBT1 may also be used as a diagnostic for diagnosing the
      susceptibility of an individual to sulfate or phosphate groups, as well in
      methods for diagnosis, prophylaxis or treatment of diseases caused by an
      agent which possesses at least one accessible sulfate and/or at least one
      accessible phosphate group. The invention is based on the discovery that
      human protein ***DMBT1*** (Deleted in Malignant Brain Tumors 1) is a
      dual-specific pattern recognition receptor for non-self (bacterial cell
      wall components, gp120 of HIV, damage-, inflammation-, and cancer-causing
      sulfated carbohydrates) and self structures (DNA, phospholipids, cell
      surface and extracellular matrix carbohydrates), which interacts with
      accessible sulfate and or phosphate groups, which are present on numerous
      compds., compns., and organisms. Pattern recognition of ***DMBT1***
      is mediated via an 11-amino acid motif (GRVEVLYRGSW) that binds sulfate
      and phosphate groups. By acting as a dual-specific PRR, ***DMBT1***
      may exert a general insulator function against a broad range of pathogens,
      which predicts a contribution of ***DMBT1*** germline deletions to
      human susceptibility to infection, inflammation, and cancer. Furthermore,
      a 40% decreased level of ***DMBT1*** in male mice correlates with an
      increased susceptibility and with a deficient protection against dextran
      sulfate sodium-induced tissue damage and inflammation in the colon.
RE.CNT 7   THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4   ANSWER 9 OF 11 BIOSIS   COPYRIGHT (c) 2009 The Thomson Corporation on STN

DUPLICATE 6
AN   2005:324157 BIOSIS <<LOGINID::20090423>>
DN   PREV200510117337
TI   Generation of a vector system facilitating cloning of   ***DMBT1***
      variants and recombinant expression of functional full-length
        DMBT1   .
AU   ***End, Caroline***   ; Lyer, Stefan; Renner, Marcus; Stahl, Cordula;
      Ditzer, Jutta; Holloschi, Andreas; Kuhn, Hella-M.; Flammann, Heiko T.;
      Poustka, Annemarie; Hafner, Mathias; Mollenhauer, Jan [Reprint Author];
      Kioschis, Petra
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, Neuenheimer Feld 280,
      D-69120 Heidelberg, Germany
      j.mollenhauer@dkfz.de
SO   Protein Expression and Purification, (JUN 2005) Vol. 41, No. 2, pp.
      275-286.
      CODEN: PEXPEJ. ISSN: 1046-5928.
DT   Article
LA   English
ED   Entered STN: 25 Aug 2005
      Last Updated on STN: 25 Aug 2005

AB   Deleted in malignant brain tumours 1 (***DMBT1***) codes for a similar
      to 340 kDa glycoprotein with highly repetitive scavenger receptor
      cysteine-rich (SRCR) domains.   ***DMBT1***   was implicated in cancer.
      defence against viral and bacterial infections, and differentiation of
      epithelial cells. Recombinant expression and purification of
        DMBT1   is an essential step for systematic standardized functional
      research and towards the evaluation of its therapeutical potential. So
      far,   ***DMBT1***   is obtained from natural sources such as
      bronchioalveolar lavage or saliva, resulting in time consuming sample
      collection, low yields, and protein preparations which may substantially
      vary due to differential processing and genetic polymorphism, all of which
      impedes functional research on   ***DMBT1*** . Cloning of   ***DMBT1***
      cDNAs is hampered because of the size and the 13 highly homologous SRCR
      exons. In this Study, we report oil the setup of a vector system that
      facilitates cloning of   ***DMBT1***   variants. We demonstrate
      applicability of the vector system by expression of the largest
        DMBT1   variant in a tetracycline-inducible mammalian expression
      system using the Chinese hamster ovary cell line. Yields Lip to 30 mg
      rDMBT1 per litre of cell Culture supernatant could be achieved with an
      optimized production procedure. By harnessing the specific
      bacteria-binding property of   ***DMBT1***   we established an affinity
      purification procedure which allows the isolation of more than 3 mg rDMBT1
      with a Purity of about 95 %. Although the glycosylation moieties of
      rDMBT1 are different front   ***DMBT1***   (SAG) isolated front saliva, we
      demonstrate that rDMBT1 is functionally active in aggregating
      Gram-positive and Gram-negative bacteria and binding to C1q and
      lactoferrin, which represent two known endogenous   ***DMBT1***   ligands.
      (c) 2005 Elsevier Inc. All rights reserved.

L4   ANSWER 10 OF 11 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 7
AN   2005:69186 BIOSIS <<LOGINID::20090423>>
DN   PREV200500070157
TI   Bacteria binding by   ***DMBT1***   /SAG/gp-340 is confined to the
      VEVLXXXXW motif in its scavenger receptor cysteine-rich domains.
AU   Bikker, Floris J.; Ligtenberg, Antoon J. M. [Reprint Author];   ***End,***

       ***   Caroline***   ; Renner, Marcus; Blaich, Stephanie; Lyer, Stefan;
Wittig,
       Rainer; van't Hof, Wim; Veerman, Enno C. I.; Nazmi, Kamran; De
       Blieck-Hogervorst, Jolanda M. A.; Kioschis, Petra; Amerongen, Arie V.
       Nieuw; Poustka, Annemarie; Mollenhauer, Jan
CS   Acad Ctr Dent AmsterdamDept Oral Biochem, Free Univ Amsterdam,
       Boechorststr 7, NL-1081 BT, Amsterdam, Netherlands
       ajm.ligtenberg@vumc.nl
AB   The scavenger receptor cysteine-rich (SRCR) proteins form an archaic group
       of metazoan proteins characterized by the presence of SRCR domains. These
       proteins are classified in group A and B based on the number of conserved
       cysteine residues in their SRCR domains, i.e. six for group A and eight
       for group B. The protein   ***DMBT1***   (deleted in malignant brain
       tumors 1), which is identical to salivary agglutinin and lung gp-340,
       belongs to the group B SRCR proteins and is considered to be involved in
       tumor suppression and host defense by pathogen binding. In a previous
       study we used non-overlapping synthetic peptides covering the SRCR
       consensus sequence to identify a 16-amino acid bacteria-binding protein
       loop (peptide SRCRP2; QGRVEVLYRGSWGTVC) within the SRCR domains. In this
       study, using overlapping peptides, we pinpointed the minimal
       bacteria-binding site on SRCRP2, and thus   ***DMBT1***   , to an 11-amino
       acid motif (***DMBT1***   pathogen-binding site 1 or   ***DMBT1pbs1***
       ; GRVEVLYRGSW). An alanine substitution scan revealed that VEVL and Trp
       are critical residues in this motif. Bacteria binding by
         DMBT1pbs1   was different from the bacteria binding by the
       macrophage receptor MARCO in which an RXR motif was critical. In
       addition, the homologous consensus sequences of a number of SRCR proteins
       were synthesized and tested for bacteria binding. Only consensus
       sequences of   ***DMBT1***   orthologues bound bacteria by this motif.

L4   ANSWER 11 OF 11 SCISEARCH COPYRIGHT (c) 2009 The Thomson Corporation on
       STN
AN   2009:102902 SCISEARCH <<LOGINID::20090423>>
GA   The Genuine Article (R) Number: V80CV
TI   THE PUTATIVE TUMOR SUPPRESSOR   ***DMBT1***   CONFERS MUCOSAL PROTECTION
       IN VIVO AND INHIBITS BACTERIAL INFECTION IN VITRO
AU   Renner, Marcus (Reprint); Bergmann, Gaby; Krebs, Inge; Lyer, Stefan;
         End, Caroline   ; Sina, Christian; Freidekind, Olga; Poustka,
       Annemarie; Mollenhauer, Jan
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, D-69120 Heidelberg,
       Germany
AU   ***End, Caroline***   ; Kioschis, Petra; Haffner, Mathias
CS   Univ Appl Sci Mannheim, Inst Mol Biol & Cell Culture Technol, D-68163
       Mannheim, Germany
AU   Helmke, Burkhard; Gassler, Nikolaus; Autschbach, Frank
CS   Univ Heidelberg, Inst Pathol, D-69120 Heidelberg, Germany
AU   Sina, Christian; Rosenstiel, Philip; Schreiber, Stefan
CS   Univ Hosp Schleswig Holstein, Dept Med 1, D-24105 Kiel, Germany
AU   Reinhard, Claudia; Stoeger, Tobias; Schulz, Holger
CS   Natl Ctr Environm & Hlth GmbH, Inst Inhalat Biol, D-85764 Neuherberg,

```
        Germany
AU   Hilberg, Frank
CS   Boehringer Ingelheim Austria, NCE Pharmacol, R&D Vienna, A-1121 Vienna,
     Austria
CYA  Germany; Austria
SO   ANTICANCER RESEARCH, (SEP-OCT 2004) Vol. 24, No. 5D, pp. 3610-3611. MA
     422.
     ISSN: 0250-7005.
PB   INT INST ANTICANCER RESEARCH, EDITORIAL OFFICE 1ST KM KAPANDRITIOU-KALAMOU
     RD KAPANDRITI, PO BOX 22, ATHENS 19014, GREECE.
DT   Conference; Journal
LA   English
REC  Reference Count: 0
ED   Entered STN: 29 Jan 2009
     Last Updated on STN: 29 Jan 2009


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E1         17     BLAICH S/AU
E2          1     BLAICH SOEREN/AU
E3         21 --> BLAICH STEPHANIE/AU
E4         72     BLAICH T/AU
E5         28     BLAICH TH/AU
E6         16     BLAICH U/AU
E7          4     BLAICH UTA/AU
E8         57     BLAICH W/AU
E9          4     BLAICH WILHELM/AU
E10         2     BLAICH WOLFGANG/AU
E11         1     BLAICHE IMAD F/AU
E12        30     BLAICHER A/AU

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L5         20 ("BLAICH S"/AU OR "BLAICH SOEREN"/AU OR "BLAICH STEPHANIE"/AU)
              AND DMBT?

=> dup rem l5
PROCESSING COMPLETED FOR L5
L6          5 DUP REM L5 (15 DUPLICATES REMOVED)

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 5 ANSWERS - CONTINUE? Y/(N):y

L6   ANSWER 1 OF 5  CAPLUS  COPYRIGHT 2009 ACS on STN  DUPLICATE 1
AN   2009:402136  CAPLUS <<LOGINID::20090423>>
DN   150:327861
TI    ***DMBT1***   functions as pattern-recognition molecule for
     poly-sulfated and poly-phosphorylated ligands
AU   End, Caroline; Bikker, Floris; Renner, Marcus; Bergmann, Gaby; Lyer,
     Stefan;   ***Blaich, Stephanie***  ; Hudler, Melanie; Helmke, Burkhard;
     Gassler, Nikolaus; Autschbach, Frank; Ligtenberg, Antoon J. M.; Benner,
     Axel; Holmskov, Uffe; Schirmacher, Peter; Nieuw Amerongen, Arie V.;
     Rosenstiel, Philip; Sina, Christian; Franke, Andre; Hafner, Mathias;
     Kioschis, Petra; Schreiber, Stefan; Poustka, Annemarie; Mollenhauer, Jan
CS   Division of Molecular Genome Analysis, German Cancer Research Center,
     Heidelberg, Germany
SO   European Journal of Immunology (2009), 39(3), 833-842
     CODEN: EJIMAF; ISSN: 0014-2980
```

PB   Wiley-VCH Verlag GmbH & Co. KGaA
DT   Journal
LA   English

AB   Deleted in malignant brain tumors 1 (***DMBT1***) is a secreted
      glycoprotein displaying a broad bacterial-binding spectrum. Recent
      functional and genetic studies linked ***DMBT1*** to the suppression
      of LPS-induced TLR4-mediated NF-.kappa.B activation and to the
      pathogenesis of Crohn's disease. Here, the authors aimed at unraveling
      the mol. basis of its function in mucosal protection and of its broad
      pathogen-binding specificity. The authors report that ***DMBT1***
      directly interacts with dextran sulfate sodium (DSS) and carrageenan, a
      structurally similar sulfated polysaccharide, which is used as a
      texturizer and thickener in human dietary products. However, binding of
       DMBT1 does not reduce the cytotoxic effects of these agents to
      intestinal/epithelial cells in vitro. DSS and carrageenan compete for
       DMBT1 -mediated bacterial aggregation via interaction with its
      bacterial-recognition motif. Competition and ELISA studies identify
      poly-sulfated and poly-phosphorylated structures as ligands for this
      recognition motif, such as heparan sulfate, LPS, and lipoteichoic acid.
      Dose-response studies in ***Dmbt1*** -/- and ***Dmbt1*** +/+ mice
      utilizing the DSS-induced colitis model demonstrate a differential
      response only to low but not to high DSS doses. The authors propose that
       DMBT1 functions as pattern-recognition mol. for poly-sulfated and
      poly-phosphorylated ligands providing a mol. basis for its broad
      bacterial-binding specificity and its inhibitory effects on LPS-induced
      TLR4-mediated NF-.kappa.B activation.

L6   ANSWER 2 OF 5 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 2
AN   2008:112593 BIOSIS <<LOGINID::20090423>>
DN   PREV200800114726
TI   ***DMBT1*** confers mucosal protection in vivo and a deletion variant
      is associated with Crohn's disease.
AU   Renner, Marcus; Bergmann, Gaby; Krebs, Inge; End, Caroline; Lyer, Stefan;
      Hilberg, Frank; Helmke, Burkhard; Gassler, Nikolaus; Autschbach, Frank;
      Bikker, Floris; Strobel-Freidekind, Olga; Gronert-Sum, Sabine; Benner,
      Axel; ***Blaich, Stephanie*** ; Wittig, Rainer; Hudler, Melanie;
      Ligtenberg, Antoon J.; Madsen, Jens; Holmskov, Uffe; Annese, Vito;
      Latiano, Anna; Schirmacher, Peter; Amerongen, Arie V. Nieuw; D'Amato,
      Mauro; Kioschis, Petra; Hafner, Mathias; Poustka, Annemarie; Mollenhauer,
      Jan [Reprint Author]
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, Neuenheimer Feld 280,
      D-69120 Heidelberg, Germany
      j.mollenhauer@dkfz.de
SO   Gastroenterology, (NOV 2007) Vol. 133, No. 5, pp. 1499-1509.
      CODEN: GASTAB. ISSN: 0016-5085.
DT   Article
LA   English
ED   Entered STN: 13 Feb 2008
      Last Updated on STN: 13 Feb 2008

AB   Background & Aims: Impaired mucosal. defense plays an important role in
      the pathogenesis of Crohn's disease (CD), one of the main subtypes of
      inflammatory bowel disease (IBD). Deleted in malignant brain tumors 1(
       DMBT1) is a secreted scavenger receptor cysteine-rich protein
with
      predominant expression in. the intestine and has been proposed to exert
      possible functions in regenerative processes and pathogen defense. Here,

we aimed at analyzing the role of   ***DMBT1***   in IBD. Methods: We
studied   ***DMBT1***   expression in IBD and normal tissues by
quantitative reverse transcription-polymerase chain reaction,
immunohistochemistry, and mRNA in situ hybridization. Genetic
polymorphisms within   ***DMBT1***   were analyzed in an Italian IBD
case-control sample.   ***Dmbt1***   (-/-) mice were generated,
characterized, and analyzed for their susceptibility to dextran sulfate
sodium-induced colitis. Results: ***DMBT1***   levels correlate with
disease activity in inflamed IBD tissues. A highly significant fraction
of the patients with IBD displayed up-regulation of   ***DMBT1***
specifically in the intestinal epithelial surface cells and Paneth cells.
A deletion allele of   ***DMBT1***   with a reduced: number of scavenger
receptor cysteine-rich domain coding exons is associated with an increased
risk of CD (P =.00056; odds ratio, 1.75) but not for ulcerative colitis.
    Dmbt1   (-/-) mice display enhanced susceptibility to dextran
sulfate
sodium-induced colitis and elevated Tnf, Il6, and Nod2 expression levels
during inflammation. Conclusions: ***DMBT1***   may play a role in
intestinal mucosal protection and prevention of inflammation. Impaired
    DMBT1   function may contribute to the pathogenesis of CD.

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L6    ANSWER 3 OF 5  CAPLUS  COPYRIGHT 2009 ACS on STN
AN    2005:953991  CAPLUS  <<LOGINID::20090423>>
DN    143:260332
TI    Use of   ***DMBT1***   protein for capturing sulfate and phosphate groups
      exposed in disease-associated agents
IN    Mollenhauer, Jan; End, Caroline;   ***Blaich, Stephanie***   ; Bergmann,
      Gaby; Renner, Marcus; Lyer, Stefan; Wittig, Rainer; Poustka, Annemarie;
      Bikker, Floris; Ligtenberg, Anton; Nieuw-Amerongen, Arie; Veerman, Enno
PA    Deutsches Krebsforschungszentrum Stiftung des Oeffentlichen Rechts,
      Germany
SO    Eur. Pat. Appl., 57 pp.
      CODEN: EPXXDW
DT    Patent
LA    English
FAN.CNT 1
      PATENT NO.           KIND   DATE          APPLICATION NO.          DATE
      --------------       ----   --------      --------------------     --------
PI    EP 1568374           A1     20050831      EP 2004-4281             20040225
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
      WO 2005079834        A1     20050901      WO 2005-EP1994           20050225
      WO 2005079834        A9     20051027
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
        RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
             RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
             MR, NE, SN, TD, TG
      EP 1727558           A1     20061206      EP 2005-732131           20050225
         R:  AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
```

```
     US 20080234185      A1    20080925    US 2006-590657           20060825
PRAI EP 2004-4281        A     20040225
     WO 2005-EP1994      W     20050225
AB   Disclosed is the use of   ***DMBT1***  , or of the nucleic acid encoding
     it, for the manuf. of a medicament for the treatment of a patient
     suffering from a disease caused by an agent which possesses at least one
     accessible sulfate and/or at least one accessible phosphate group.
       ***DMBT1***   may also be used as a diagnostic for diagnosing the
     susceptibility of an individual to sulfate or phosphate groups, as well in
     methods for diagnosis, prophylaxis or treatment of diseases caused by an
     agent which possesses at least one accessible sulfate and/or at least one
     accessible phosphate group.  The invention is based on the discovery that
     human protein  ***DMBT1***  (Deleted in Malignant Brain Tumors 1) is a
     dual-specific pattern recognition receptor for non-self (bacterial cell
     wall components, gp120 of HIV, damage-, inflammation-, and cancer-causing
     sulfated carbohydrates) and self structures (DNA, phospholipids, cell
     surface and extracellular matrix carbohydrates), which interacts with
     accessible sulfate and or phosphate groups, which are present on numerous
     compds., compns., and organisms.  Pattern recognition of  ***DMBT1***
     is mediated via an 11-amino acid motif (GRVEVLYRGSW) that binds sulfate
     and phosphate groups.  By acting as a dual-specific PRR,  ***DMBT1***
     may exert a general insulator function against a broad range of pathogens,
     which predicts a contribution of  ***DMBT1***  germline deletions to
     human susceptibility to infection, inflammation, and cancer.  Furthermore,
     a 40% decreased level of  ***DMBT1***  in male mice correlates with an
     increased susceptibility and with a deficient protection against dextran
     sulfate sodium-induced tissue damage and inflammation in the colon.
RE.CNT  7    THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT


L6   ANSWER 4 OF 5  BIOSIS  COPYRIGHT (c) 2009 The Thomson Corporation  on STN
     DUPLICATE 3
AN   2005:69186  BIOSIS <<LOGINID::20090423>>
DN   PREV200500070157
TI   Bacteria binding by  ***DMBT1***  /SAG/gp-340 is confined to the
     VEVLXXXXW motif in its scavenger receptor cysteine-rich domains.
AU   Bikker, Floris J.; Ligtenberg, Antoon J. M. [Reprint Author]; End,
     Caroline; Renner, Marcus;  ***Blaich, Stephanie***  ; Lyer, Stefan;
     Wittig, Rainer; van't Hof, Wim; Veerman, Enno C. I.; Nazmi, Kamran; De
     Blieck-Hogervorst, Jolanda M. A.; Kioschis, Petra; Amerongen, Arie V.
     Nieuw; Poustka, Annemarie; Mollenhauer, Jan
CS   Acad Ctr Dent AmsterdamDept Oral Biochem, Free Univ Amsterdam,
     Boechorststr 7, NL-1081 BT, Amsterdam, Netherlands
     ajm.ligtenberg@vumc.nl
SO   Journal of Biological Chemistry, (November 12 2004) Vol. 279, No. 46, pp.
     47699-47703. print.
     CODEN: JBCHA3. ISSN: 0021-9258.
DT   Article
LA   English
ED   Entered STN: 16 Feb 2005
     Last Updated on STN: 16 Feb 2005
AB   The scavenger receptor cysteine-rich (SRCR) proteins form an archaic group
     of metazoan proteins characterized by the presence of SRCR domains.  These
     proteins are classified in group A and B based on the number of conserved
     cysteine residues in their SRCR domains, i.e. six for group A and eight
     for group B.  The protein  ***DMBT1***  (deleted in malignant brain
     tumors 1), which is identical to salivary agglutinin and lung gp-340,
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belongs to the group B SRCR proteins and is considered to be involved in
tumor suppression and host defense by pathogen binding. In a previous
study we used non-overlapping synthetic peptides covering the SRCR
consensus sequence to identify a 16-amino acid bacteria-binding protein
loop (peptide SRCRP2; QGRVEVLYRGSWGTVC) within the SRCR domains. In this
study, using overlapping peptides, we pinpointed the minimal
bacteria-binding site on SRCRP2, and thus   ***DMBT1***   , to an 11-amino
acid motif (***DMBT1***   pathogen-binding site 1 or   ***DMBT1pbs1***
; GRVEVLYRGSW). An alanine substitution scan revealed that VEVL and Trp
are critical residues in this motif. Bacteria binding by
   DMBT1pbs1   was different from the bacteria binding by the
macrophage receptor MARCO in which an RXR motif was critical. In
addition, the homologous consensus sequences of a number of SRCR proteins
were synthesized and tested for bacteria binding. Only consensus
sequences of   ***DMBT1***   orthologues bound bacteria by this motif.

TI   Carcinogen inducibility in vivo and down-regulation of   ***DMBT1***
      during breast carcinogenesis.
AU   Mollenhauer, Jan [Reprint Author]; Helmke, Burkhard; Medina, Daniel;
      Bergmann, Gaby; Gassler, Nikolaus; Mueller, Hanna; Lyer, Stefan;
      Diedrichs, Laura; Renner, Marcus; Wittig, Rainer;   ***Blaich,***
   ***   Stephanie*** ; Hamann, Ute; Madsen, Jens; Holmskov, Uffe; Bikker,
Floris;
      Ligtenberg, Antoon; Carlen, Anette; Olsson, Jan; Otto, Herwart F.;
      O'Malley, Bert; Poustka, Annemarie
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
      Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
      j.mollenhauer@dkfz-heidelberg.de; j.mollenhauer@dkfz-heidelberg.de
AB   Deleted in malignant brain tumors 1 (***DMBT1***) has been proposed as
      a candidate tumor suppressor for brain and epithelial cancer. Initial
      studies suggested loss of expression rather than mutation as the
      predominant mode of   ***DMBT1***   inactivation. However, in situ
      studies in lung cancer demonstrated highly sophisticated changes of
       DMBT1   expression and localization, pointing to a chronological
      order of events. Here we report on the investigation of   ***DMBT1***
      in breast cancer in order to test whether these principles might also be
      attributable to other tumor types. Comprehensive mutational analyses did
      not uncover unambiguous inactivating   ***DMBT1***   mutations in breast
      cancer. Expression analyses in the human and mouse mammary glands pointed
      to the necessity of   ***DMBT1***   induction. While age-dependent and
      hormonal effects could be ruled out, 9 of 10 mice showed induction of
       Dmbt1   expression after administration of the carcinogen
      7,12-dimethybenz(alpha)anthracene prior to the onset of tumorigenesis or
      other histopathological changes.   ***DMBT1***   displayed significant
      up-regulation in human tumor-flanking tissues compared to in normal breast
      tissues (P < 0.05). However, the breast tumor cells displayed a switch

from lumenal secretion to secretion to the extracellular matrix and a
significant down-regulation compared to that in matched normal flanking
tissues (P < 0.01). We concluded that loss of expression also is the
predominant mode of   ***DMBT1***   inactivation in breast cancer. The
dynamic behavior of   ***DMBT1***   in lung carcinoma is fully reflected
in breast cancer, which suggests that this behavior might be common to
tumor types arising from monolayered epithelia.


```
=> e bergmann gaby/au
E1          1       BERGMANN GABRIEL GUSTAVO/AU
E2          1       BERGMANN GABRIELE/AU
E3         14 --> BERGMANN GABY/AU
E4          5       BERGMANN GADDY T/AU
E5          1       BERGMANN GARSTEN/AU
E6          1       BERGMANN GEB PULTER/AU
E7         93       BERGMANN GEORG/AU
E8          1       BERGMANN GEORG DR/AU
E9          1       BERGMANN GERALD/AU
E10        94       BERGMANN GERD/AU
E11         1       BERGMANN GERD H F/AU
E12        36       BERGMANN GERHARD/AU

=> s e1-e3 and Dmbt?
L7          14 ("BERGMANN GABRIEL GUSTAVO"/AU OR "BERGMANN GABRIELE"/AU OR "BER
                GMANN GABY"/AU) AND DMBT?

=> dup rem l7
PROCESSING COMPLETED FOR L7
L8           5 DUP REM L7 (9 DUPLICATES REMOVED)

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 5 ANSWERS - CONTINUE? Y/(N):y

L8   ANSWER 1 OF 5 CAPLUS  COPYRIGHT 2009 ACS on STN  DUPLICATE 1
AN   2009:402136  CAPLUS <<LOGINID::20090423>>
DN   150:327861
TI     ***DMBT1***    functions as pattern-recognition molecule for
     poly-sulfated and poly-phosphorylated ligands
AU   End, Caroline; Bikker, Floris; Renner, Marcus;   ***Bergmann, Gaby***  ;
     Lyer, Stefan; Blaich, Stephanie; Hudler, Melanie; Helmke, Burkhard;
     Gassler, Nikolaus; Autschbach, Frank; Ligtenberg, Antoon J. M.; Benner,
     Axel; Holmskov, Uffe; Schirmacher, Peter; Nieuw Amerongen, Arie V.;
     Rosenstiel, Philip; Sina, Christian; Franke, Andre; Hafner, Mathias;
     Kioschis, Petra; Schreiber, Stefan; Poustka, Annemarie; Mollenhauer, Jan
CS   Division of Molecular Genome Analysis, German Cancer Research Center,
     Heidelberg, Germany
SO   European Journal of Immunology (2009), 39(3), 833-842
     CODEN: EJIMAF; ISSN: 0014-2980
PB   Wiley-VCH Verlag GmbH & Co. KGaA
DT   Journal
LA   English
AB   Deleted in malignant brain tumors 1 (  ***DMBT1***  ) is a secreted
     glycoprotein displaying a broad bacterial-binding spectrum.  Recent
     functional and genetic studies linked   ***DMBT1***   to the suppression
     of LPS-induced TLR4-mediated NF-.kappa.B activation and to the
     pathogenesis of Crohn's disease.  Here, the authors aimed at unraveling
```

the mol. basis of its function in mucosal protection and of its broad
pathogen-binding specificity. The authors report that   ***DMBT1***
directly interacts with dextran sulfate sodium (DSS) and carrageenan, a
structurally similar sulfated polysaccharide, which is used as a
texturizer and thickener in human dietary products. However, binding of
   DMBT1   does not reduce the cytotoxic effects of these agents to
intestinal/epithelial cells in vitro. DSS and carrageenan compete for
   DMBT1   -mediated bacterial aggregation via interaction with its
bacterial-recognition motif. Competition and ELISA studies identify
poly-sulfated and poly-phosphorylated structures as ligands for this
recognition motif, such as heparan sulfate, LPS, and lipoteichoic acid.
Dose-response studies in   ***Dmbt1*** -/- and   ***Dmbt1*** +/+ mice
utilizing the DSS-induced colitis model demonstrate a differential
response only to low but not to high DSS doses. The authors propose that
   DMBT1   functions as pattern-recognition mol. for poly-sulfated and
poly-phosphorylated ligands providing a mol. basis for its broad
bacterial-binding specificity and its inhibitory effects on LPS-induced
TLR4-mediated NF-.kappa.B activation.

L8   ANSWER 2 OF 5 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
     DUPLICATE 2
AN   2008:112593 BIOSIS <<LOGINID::20090423>>
DN   PREV200800114726
TI   ***DMBT1***   confers mucosal protection in vivo and a deletion variant
     is associated with Crohn's disease.
AU   Renner, Marcus; ***Bergmann, Gaby*** ; Krebs, Inge; End, Caroline;
     Lyer, Stefan; Hilberg, Frank; Helmke, Burkhard; Gassler, Nikolaus;
     Autschbach, Frank; Bikker, Floris; Strobel-Freidekind, Olga; Gronert-Sum,
     Sabine; Benner, Axel; Blaich, Stephanie; Wittig, Rainer; Hudler, Melanie;
     Ligtenberg, Antoon J.; Madsen, Jens; Holmskov, Uffe; Annese, Vito;
     Latiano, Anna; Schirmacher, Peter; Amerongen, Arie V. Nieuw; D'Amato,
     Mauro; Kioschis, Petra; Hafner, Mathias; Poustka, Annemarie; Mollenhauer,
     Jan [Reprint Author]
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, Neuenheimer Feld 280,
     D-69120 Heidelberg, Germany
     j.mollenhauer@dkfz.de
SO   Gastroenterology, (NOV 2007) Vol. 133, No. 5, pp. 1499-1509.
     CODEN: GASTAB. ISSN: 0016-5085.
DT   Article
LA   English
ED   Entered STN: 13 Feb 2008
     Last Updated on STN: 13 Feb 2008
AB   Background & Aims: Impaired mucosal. defense plays an important role in
     the pathogenesis of Crohn's disease (CD), one of the main subtypes of
     inflammatory bowel disease (IBD). Deleted in malignant brain tumors 1(
        DMBT1) is a secreted scavenger receptor cysteine-rich protein
with
     predominant expression in. the intestine and has been proposed to exert
     possible functions in regenerative processes and pathogen defense. Here,
     we aimed at analyzing the role of   ***DMBT1***   in IBD. Methods: We
     studied   ***DMBT1***   expression in IBD and normal tissues by
     quantitative reverse transcription-polymerase chain reaction,
     immunohistochemistry, and mRNA in situ hybridization. Genetic
     polymorphisms within   ***DMBT1***   were analyzed in an Italian IBD
     case-control sample.   ***Dmbt1*** (-/-) mice were generated,
     characterized, and analyzed for their susceptibility to dextran sulfate
     sodium-induced colitis. Results: ***DMBT1***   levels correlate with

disease activity in inflamed IBD tissues. A highly significant fraction
of the patients with IBD displayed up-regulation of   ***DMBT1***
specifically in the intestinal epithelial surface cells and Paneth cells.
A deletion allele of   ***DMBT1***   with a reduced: number of scavenger
receptor cysteine-rich domain coding exons is associated with an increased
risk of CD (P =.00056; odds ratio, 1.75) but not for ulcerative colitis.
    Dmbt1   (-/-) mice display enhanced susceptibility to dextran
sulfate
sodium-induced colitis and elevated Tnf, Il6, and Nod2 expression levels
during inflammation. Conclusions: ***DMBT1***   may play a role in
intestinal mucosal protection and prevention of inflammation. Impaired
    DMBT1   function may contribute to the pathogenesis of CD.

L8   ANSWER 3 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN
AN   2005:953991 CAPLUS <<LOGINID::20090423>>
DN   143:260332
TI   Use of   ***DMBT1***   protein for capturing sulfate and phosphate groups
      exposed in disease-associated agents
IN   Mollenhauer, Jan; End, Caroline; Blaich, Stephanie;   ***Bergmann, Gaby***
      ; Renner, Marcus; Lyer, Stefan; Wittig, Rainer; Poustka, Annemarie;
      Bikker, Floris; Ligtenberg, Anton; Nieuw-Amerongen, Arie; Veerman, Enno
PA   Deutsches Krebsforschungszentrum Stiftung des Oeffentlichen Rechts,
      Germany
SO   Eur. Pat. Appl., 57 pp.
      CODEN: EPXXDW
DT   Patent
LA   English
FAN.CNT 1
      PATENT NO.   KIND   DATE   APPLICATION NO.   DATE
      ---------------   ----   --------   --------------------   --------
PI   EP 1568374   A1   20050831   EP 2004-4281   20040225
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
      WO 2005079834   A1   20050901   WO 2005-EP1994   20050225
      WO 2005079834   A9   20051027
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
             RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
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      EP 1727558   A1   20061206   EP 2005-732131   20050225
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             IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
      US 20080234185   A1   20080925   US 2006-590657   20060825
PRAI EP 2004-4281   A   20040225
      WO 2005-EP1994   W   20050225
AB   Disclosed is the use of   ***DMBT1***   , or of the nucleic acid encoding
      it, for the manuf. of a medicament for the treatment of a patient
      suffering from a disease caused by an agent which possesses at least one
      accessible sulfate and/or at least one accessible phosphate group.
        DMBT1   may also be used as a diagnostic for diagnosing the

susceptibility of an individual to sulfate or phosphate groups, as well in methods for diagnosis, prophylaxis or treatment of diseases caused by an agent which possesses at least one accessible sulfate and/or at least one accessible phosphate group. The invention is based on the discovery that human protein ***DMBT1*** (Deleted in Malignant Brain Tumors 1) is a dual-specific pattern recognition receptor for non-self (bacterial cell wall components, gp120 of HIV, damage-, inflammation-, and cancer-causing sulfated carbohydrates) and self structures (DNA, phospholipids, cell surface and extracellular matrix carbohydrates), which interacts with accessible sulfate and or phosphate groups, which are present on numerous compds., compns., and organisms. Pattern recognition of ***DMBT1*** is mediated via an 11-amino acid motif (GRVEVLYRGSW) that binds sulfate and phosphate groups. By acting as a dual-specific PRR, ***DMBT1*** may exert a general insulator function against a broad range of pathogens, which predicts a contribution of ***DMBT1*** germline deletions to human susceptibility to infection, inflammation, and cancer. Furthermore, a 40% decreased level of ***DMBT1*** in male mice correlates with an increased susceptibility and with a deficient protection against dextran sulfate sodium-induced tissue damage and inflammation in the colon.

RE.CNT 7   THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8   ANSWER 4 OF 5 SCISEARCH COPYRIGHT (c) 2009 The Thomson Corporation on STN
AN   2009:102902 SCISEARCH <<LOGINID::20090423>>
GA   The Genuine Article (R) Number: V80CV
TI   THE PUTATIVE TUMOR SUPPRESSOR ***DMBT1*** CONFERS MUCOSAL PROTECTION IN VIVO AND INHIBITS BACTERIAL INFECTION IN VITRO
AU   Renner, Marcus (Reprint); ***Bergmann, Gaby*** ; Krebs, Inge; Lyer, Stefan; End, Caroline; Sina, Christian; Freidekind, Olga; Poustka, Annemarie; Mollenhauer, Jan
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, D-69120 Heidelberg, Germany
AU   End, Caroline; Kioschis, Petra; Haffner, Mathias
CS   Univ Appl Sci Mannheim, Inst Mol Biol & Cell Culture Technol, D-68163 Mannheim, Germany
AU   Helmke, Burkhard; Gassler, Nikolaus; Autschbach, Frank
CS   Univ Heidelberg, Inst Pathol, D-69120 Heidelberg, Germany
AU   Sina, Christian; Rosenstiel, Philip; Schreiber, Stefan
CS   Univ Hosp Schleswig Holstein, Dept Med 1, D-24105 Kiel, Germany
AU   Reinhard, Claudia; Stoeger, Tobias; Schulz, Holger
CS   Natl Ctr Environm & Hlth GmbH, Inst Inhalat Biol, D-85764 Neuherberg, Germany
AU   Hilberg, Frank
CS   Boehringer Ingelheim Austria, NCE Pharmacol, R&D Vienna, A-1121 Vienna, Austria
CYA   Germany; Austria
SO   ANTICANCER RESEARCH, (SEP-OCT 2004) Vol. 24, No. 5D, pp. 3610-3611. MA 422.
      ISSN: 0250-7005.
PB   INT INST ANTICANCER RESEARCH, EDITORIAL OFFICE 1ST KM KAPANDRITIOU-KALAMOU RD KAPANDRITI, PO BOX 22, ATHENS 19014, GREECE.
DT   Conference; Journal
LA   English
REC   Reference Count: 0
ED   Entered STN: 29 Jan 2009
      Last Updated on STN: 29 Jan 2009

AN   2004:130519 BIOSIS <<LOGINID::20090423>>
DN   PREV200400116079
TI   Carcinogen inducibility in vivo and down-regulation of   ***DMBT1***
      during breast carcinogenesis.
AU   Mollenhauer, Jan [Reprint Author]; Helmke, Burkhard; Medina, Daniel;
         Bergmann, Gaby ; Gassler, Nikolaus; Mueller, Hanna; Lyer, Stefan;
      Diedrichs, Laura; Renner, Marcus; Wittig, Rainer; Blaich, Stephanie;
      Hamann, Ute; Madsen, Jens; Holmskov, Uffe; Bikker, Floris; Ligtenberg,
      Antoon; Carlen, Anette; Olsson, Jan; Otto, Herwart F.; O'Malley, Bert;
      Poustka, Annemarie
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
      Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
      j.mollenhauer@dkfz-heidelberg.de; j.mollenhauer@dkfz-heidelberg.de
SO   Genes Chromosomes & Cancer, (March 2004) Vol. 39, No. 3, pp. 185-194.
      print.
      CODEN: GCCAES. ISSN: 1045-2257.
DT   Article
LA   English
ED   Entered STN: 3 Mar 2004
      Last Updated on STN: 3 Mar 2004
AB   Deleted in malignant brain tumors 1 (***DMBT1***) has been proposed as
      a candidate tumor suppressor for brain and epithelial cancer. Initial
      studies suggested loss of expression rather than mutation as the
      predominant mode of ***DMBT1*** inactivation. However, in situ
      studies in lung cancer demonstrated highly sophisticated changes of
       DMBT1 expression and localization, pointing to a chronological
      order of events. Here we report on the investigation of ***DMBT1***
      in breast cancer in order to test whether these principles might also be
      attributable to other tumor types. Comprehensive mutational analyses did
      not uncover unambiguous inactivating ***DMBT1*** mutations in breast
      cancer. Expression analyses in the human and mouse mammary glands pointed
      to the necessity of ***DMBT1*** induction. While age-dependent and
      hormonal effects could be ruled out, 9 of 10 mice showed induction of
       Dmbt1 expression after administration of the carcinogen
      7,12-dimethybenz(alpha)anthracene prior to the onset of tumorigenesis or
      other histopathological changes. ***DMBT1*** displayed significant
      up-regulation in human tumor-flanking tissues compared to in normal breast
      tissues (P < 0.05). However, the breast tumor cells displayed a switch
      from lumenal secretion to secretion to the extracellular matrix and a
      significant down-regulation compared to that in matched normal flanking
      tissues (P < 0.01). We concluded that loss of expression also is the
      predominant mode of ***DMBT1*** inactivation in breast cancer. The
      dynamic behavior of ***DMBT1*** in lung carcinoma is fully reflected
      in breast cancer, which suggests that this behavior might be common to
      tumor types arising from monolayered epithelia.

=> Renner marcus/au
RENNER IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> e renner marcus/au

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E1              5      RENNER MARCIA F/AU
E2              3      RENNER MARCIA FERRET/AU
E3             45 -->  RENNER MARCUS/AU
E4              7      RENNER MARIA KLARA/AU
E5             21      RENNER MARIANNE/AU
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E7              4      RENNER MARK/AU
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E9             69      RENNER MARK W/AU
E10             1      RENNER MARK WILLIAM/AU
E11             7      RENNER MARKUS/AU
E12            27      RENNER MARTIN/AU

=> s e3
L9             45 "RENNER MARCUS"/AU

=> dup rem l9
PROCESSING COMPLETED FOR L9
L10            17 DUP REM L9 (28 DUPLICATES REMOVED)

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YOU HAVE REQUESTED DATA FROM 17 ANSWERS - CONTINUE? Y/(N):y

L10  ANSWER 1 OF 17  CAPLUS  COPYRIGHT 2009 ACS on STN DUPLICATE 1
AN   2009:402136  CAPLUS <<LOGINID::20090423>>
DN   150:327861
TI   DMBT1 functions as pattern-recognition molecule for poly-sulfated and
     poly-phosphorylated ligands
AU   End, Caroline; Bikker, Floris;  ***Renner, Marcus***  ; Bergmann, Gaby;
     Lyer, Stefan; Blaich, Stephanie; Hudler, Melanie; Helmke, Burkhard;
     Gassler, Nikolaus; Autschbach, Frank; Ligtenberg, Antoon J. M.; Benner,
     Axel; Holmskov, Uffe; Schirmacher, Peter; Nieuw Amerongen, Arie V.;
     Rosenstiel, Philip; Sina, Christian; Franke, Andre; Hafner, Mathias;
     Kioschis, Petra; Schreiber, Stefan; Poustka, Annemarie; Mollenhauer, Jan
CS   Division of Molecular Genome Analysis, German Cancer Research Center,
     Heidelberg, Germany
SO   European Journal of Immunology (2009), 39(3), 833-842
     CODEN: EJIMAF; ISSN: 0014-2980
PB   Wiley-VCH Verlag GmbH & Co. KGaA
DT   Journal
LA   English
AB   Deleted in malignant brain tumors 1 (DMBT1) is a secreted glycoprotein
     displaying a broad bacterial-binding spectrum.  Recent functional and
     genetic studies linked DMBT1 to the suppression of LPS-induced
     TLR4-mediated NF-.kappa.B activation and to the pathogenesis of Crohn's
     disease.  Here, the authors aimed at unraveling the mol. basis of its
     function in mucosal protection and of its broad pathogen-binding
     specificity.  The authors report that DMBT1 directly interacts with
     dextran sulfate sodium (DSS) and carrageenan, a structurally similar
     sulfated polysaccharide, which is used as a texturizer and thickener in
     human dietary products.  However, binding of DMBT1 does not reduce the
     cytotoxic effects of these agents to intestinal/epithelial cells in vitro.
     DSS and carrageenan compete for DMBT1-mediated bacterial aggregation via
     interaction with its bacterial-recognition motif.  Competition and ELISA
     studies identify poly-sulfated and poly-phosphorylated structures as
     ligands for this recognition motif, such as heparan sulfate, LPS, and
     lipoteichoic acid.  Dose-response studies in Dmbt1-/- and Dmbt1+/+ mice
```

utilizing the DSS-induced colitis model demonstrate a differential
response only to low but not to high DSS doses. The authors propose that
DMBT1 functions as pattern-recognition mol. for poly-sulfated and
poly-phosphorylated ligands providing a mol. basis for its broad
bacterial-binding specificity and its inhibitory effects on LPS-induced
TLR4-mediated NF-.kappa.B activation.

L10 ANSWER 2 OF 17 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
     DUPLICATE 2
AN   2009:132171 BIOSIS <<LOGINID::20090423>>
DN   PREV200900132171
TI   DMBT1 expression distinguishes anorectal from cutaneous melanoma.
AU   Helmke, Burkhard Maria [Reprint Author];   ***Renner, Marcus*** ;
     Poustka, Annemarie; Schirmacher, Peter; Mollenhauer, Jan; Kern, Michael
     Andre
CS   Univ Heidelberg, Inst Pathol, Neuenheimer Feld 220-221, D-69120
     Heidelberg, Germany
     burkhard.helmke@elbekliniken.de
SO   Histopathology (Oxford), (JAN 2009) Vol. 54, No. 2, pp. 233-240.
     ISSN: 0309-0167.
DT   Article
LA   English
ED   Entered STN: 18 Feb 2009
     Last Updated on STN: 25 Feb 2009
AB   Anorectal melanoma (AM) forms a rare but highly malignant subset of
     mucosal melanoma with an extremely poor prognosis. Although AMs display
     histological and immunohistochemical features very similar to cutaneous
     melanoma (CM), no association exists either with exposure to ultraviolet
     light or with melanocytic naevi. While AMs are clearly distinguished from
     CM by displaying few BRAF mutations, they are commonly indistinguishable
     from CM at the level of gene expression. The aim was to carry out
     expression analyses of classical immunohistochemical markers and of the
     protein deleted in malignant brain tumours 1 (DMBT1) in cases of primary
     anorectal malignant melanoma and CM.Expression analyses of classical
     immunohistochemical markers (S100, HMB45, Melan A and MiTF) and of the
     protein DMBT1 were carried out in 27 cases of primary anorectal malignant
     melanoma and 26 cases of CM. All AM cases analysed showed expression of
     at least three of the classical markers for melanoma. However,
     immunohistochemistry showed 19 out of 27 AM to be positive for DMBT1,
     which represented a statistically significant difference (P = 0.0009)
     compared with CM (six out of 26), which more commonly are negative for
     DMBT1 expression.These results identify DMBT1 as a molecular feature that
     may allow distinction between AM and CM and support the notion that AM
     represents an entity molecularly distinct from CM.

L10 ANSWER 3 OF 17 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
     DUPLICATE 3
AN   2007:440147 BIOSIS <<LOGINID::20090423>>
DN   PREV200700436905
TI   Regulation of DMBT1 via NOD2 and TLR4 in intestinal epithelial cells
     modulates bacterial recognition and invasion.
AU   Rosenstiel, Philip; Sina, Christian; End, Caroline;   ***Renner, Marcus***
     ; Lyer, Stefan; Till, Andreas; Hellmig, Stephan; Nikolaus, Susanna;
     Foelsch, Ulrich R.; Helmke, Burkhard; Autschbach, Frank; Schirmacher,
     Peter; Kioschis, Petra; Hafner, Mathias; Poustka, Annemarie; Mollenhauer,
     Jan; Schreiber, Stefan [Reprint Author]
CS   Univ Hosp Schleswig Holstein, Inst Clin Mol Biol, Campus

Kiel,Schittenhelmstrache 12, Kiel, Germany
s.schreiber@mucosa.de
SO   Journal of Immunology, (JUN 15 2007) Vol. 178, No. 12, pp. 8203-8211.
       CODEN: JOIMA3. ISSN: 0022-1767.
DT   Article
LA   English
ED   Entered STN: 15 Aug 2007
       Last Updated on STN: 15 Aug 2007
AB   Mucosal epithelial cell layers are constantly exposed to a complex
       resident microflora. Deleted in malignant brain tumors 1 (DMBT1) belongs
       to the group of secreted scavenger receptor cysteine-rich proteins and is
       considered to be involved in host defense by pathogen binding. This
       report describes the regulation and function of DMBT1 in intestinal
       epithelial cells, which form the primary immunological barrier for
       invading pathogens. We report that intestinal epithelial cells
       up-regulate DMBT1 upon proinflammatory stimuli (e.g., TNF-alpha, LPS). We
       demonstrate that DMBT1 is a target gene for the intracellular pathogen
       receptor NOD2 via NF-kappa B activation. DMBT1 is strongly up-regulated
       in the inflamed intestinal mucosa of Crohn's disease patients with
       wild-type, but not with mutant NOD2. We show that DMBT1 inhibits
       cytoinvasion of Salmonella enterica and LPS- and muramyl dipeptide-induced
       NF-kappa B activation and cytokine secretion in vitro. Thus, DMBT1 may
       play an important role in the first line of mucosal defense conferring
       immune exclusion of bacterial cell wall components. Dysregulated
       intestinal DMBT1 expression due to mutations in the NOD2/CARD15 gene may
       be part of the complex pathophysiology of barrier dysfunction in Crohn's
       disease.

L10   ANSWER 4 OF 17 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
       DUPLICATE 4
AN   2008:112593 BIOSIS <<LOGINID::20090423>>
DN   PREV200800114726
TI   DMBT1 confers mucosal protection in vivo and a deletion variant is
       associated with Crohn's disease.
AU   ***Renner, Marcus*** ; Bergmann, Gaby; Krebs, Inge; End, Caroline;
       Lyer, Stefan; Hilberg, Frank; Helmke, Burkhard; Gassler, Nikolaus;
       Autschbach, Frank; Bikker, Floris; Strobel-Freidekind, Olga; Gronert-Sum,
       Sabine; Benner, Axel; Blaich, Stephanie; Wittig, Rainer; Hudler, Melanie;
       Ligtenberg, Antoon J.; Madsen, Jens; Holmskov, Uffe; Annese, Vito;
       Latiano, Anna; Schirmacher, Peter; Amerongen, Arie V. Nieuw; D'Amato,
       Mauro; Kioschis, Petra; Hafner, Mathias; Poustka, Annemarie; Mollenhauer,
       Jan [Reprint Author]
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, Neuenheimer Feld 280,
       D-69120 Heidelberg, Germany
       j.mollenhauer@dkfz.de
SO   Gastroenterology, (NOV 2007) Vol. 133, No. 5, pp. 1499-1509.
       CODEN: GASTAB. ISSN: 0016-5085.
DT   Article
LA   English
ED   Entered STN: 13 Feb 2008
       Last Updated on STN: 13 Feb 2008
AB   Background & Aims: Impaired mucosal. defense plays an important role in
       the pathogenesis of Crohn's disease (CD), one of the main subtypes of
       inflammatory bowel disease (IBD). Deleted in malignant brain tumors
       1(DMBT1) is a secreted scavenger receptor cysteine-rich protein with
       predominant expression in. the intestine and has been proposed to exert
       possible functions in regenerative processes and pathogen defense. Here,

we aimed at analyzing the role of DMBT1 in IBD. Methods: We studied DMBT1
expression in IBD and normal tissues by quantitative reverse
transcription-polymerase chain reaction, immunohistochemistry, and mRNA in
situ hybridization. Genetic polymorphisms within DMBT1 were analyzed in
an Italian IBD case-control sample. Dmbt1(-/-) mice were generated,
characterized, and analyzed for their susceptibility to dextran sulfate
sodium-induced colitis. Results: DMBT1 levels correlate with disease
activity in inflamed IBD tissues. A highly significant fraction of the
patients with IBD displayed up-regulation of DMBT1 specifically in the
intestinal epithelial surface cells and Paneth cells. A deletion allele
of DMBT1 with a reduced: number of scavenger receptor cysteine-rich domain
coding exons is associated with an increased risk of CD (P =.00056; odds
ratio, 1.75) but not for ulcerative colitis. Dmbt1(-/-) mice display
enhanced susceptibility to dextran sulfate sodium-induced colitis and
elevated Tnf, Il6, and Nod2 expression levels during inflammation.
Conclusions: DMBT1 may play a role in intestinal mucosal protection and
prevention of inflammation. Impaired DMBT1 function may contribute to the
pathogenesis of CD.

L10   ANSWER 5 OF 17 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 5
AN   2007:411406 BIOSIS <<LOGINID::20090423>>
DN   PREV200700411064
TI   DMBT1 is frequently downregulated in well-differentiated gastric carcinoma
      but more frequently upregulated across various gastric cancer types.
AU   Conde, Ana R. [Reprint Author]; Martins, Ana P.; Brito, Miguel; Manuel,
      Armandina; Ramos, Sancia; Malta-Vacas, Joana;   ***Renner, Marcus*** ;
      Poustka, Annemarie; Mollenhauer, Jan; Monteiro, Carolino
CS   Univ Lisbon, Fac Farm, Av Prof Gama Pinto, P-1649003 Lisbon, Portugal
      arconde@ff.ul.pt
SO   International Journal of Oncology, (JUN 2007) Vol. 30, No. 6, pp.
      1441-1446.
      ISSN: 1019-6439.
DT   Article
LA   English
ED   Entered STN: 1 Aug 2007
      Last Updated on STN: 1 Aug 2007
AB   Well-differentiated gastric carcinomas are considered to represent a
      distinct entity emerging via specific molecular changes different from
      those found in other gastric carcinoma types. The gene deleted in
      malignant brain tumours 1 (DMBT1) at 10q25.3-q26.1 codes for a protein
      presumably involved in cell differentiation and protection and has been
      proposed as a candidate tumour suppressor for brain and epithelial cancer.
      One study reported a loss of DMBT1 expression in 12.5% (5/40) of gastric
      cancer samples. Here, we examined in more detail DMBT1 protein and mRNA
      expression in 78 primary gastric tumour samples and corresponding normal
      gastric mucosa. DMBT1 was expressed in all non-tumour gastric mucosa
      tissues. Eleven out of 71 (15%) gastric tumours were negative for the
      DMBT1 protein in immunohistochemical analyses. Lack of DMBT1 expression
      was significantly more frequently found in well-differentiated gastric
      tumours (6/18 well-differentiated tumours vs. 5/53 other subtypes;
      P=0.025). Quantitative RT-PCR revealed a downregulation of the DMBT1
      niRNA for 8/21 (38%) cases, while the remaining 13 cases (62%) displayed a
      substantial upregulation. Our data suggest that a loss of DMBT1
      expression may preferentially take place in well-differentiated gastric
      carcinoma. However, an upregulation of DMBT1 expression is more
      frequently found across all gastric cancer types.

AN   2007:343766 SCISEARCH <<LOGINID::20090423>>
GA   The Genuine Article (R) Number: 142JH
TI   Respiratory DMBT1 levels increase during lung maturation and infection and
      modulate surfactant function
AU   Mueller, Hanna (Reprint); End, Caroline; Weiss, Christel;   ***Renner,***
   ***   Marcus*** ; Mollenhauer, Jan; Linderkamp, Otwin
CS   Univ Heidelberg, Div Neonatol, Dept Pediat, D-6900 Heidelberg, Germany;
      Deutsch Krebsforschungszentrum, Div Mol Genome Anal, D-6900 Heidelberg,
      Germany; Univ Hosp Mannheim, Inst Med Sci, Mannheim, Germany
CYA   Germany
SO   EUROPEAN JOURNAL OF PEDIATRICS, (MAR 2007) Vol. 166, No. 3, pp. 279-279.
      ISSN: 0340-6199.
PB   SPRINGER, 233 SPRING STREET, NEW YORK, NY 10013 USA.
DT   Conference; Journal
LA   English
REC   Reference Count: 0
ED   Entered STN: 5 Apr 2007
      Last Updated on STN: 5 Apr 2007

AN   2007767353   MEDLINE <<LOGINID::20090423>>
DN   PubMed ID: 17908325
TI   Deleted in Malignant Brain Tumors 1 (DMBT1) is present in hyaline
      membranes and modulates surface tension of surfactant.
AU   Muller Hanna; End Caroline;   ***Renner Marcus*** ; Helmke Burkhard M;
      Gassler Nikolaus; Weiss Christel; Hartl Dominik; Griese Matthias; Hafner
      Mathias; Poustka Annemarie; Mollenhauer Jan; Poeschl Johannes
CS   Division of Neonatology, Department of Pediatrics, University of
      Heidelberg, Im Neuenheimer Feld 153, 69120 Heidelberg, Germany..
      Hanna.Mueller@med.uni-heidelberg.de
SO   Respiratory research, (2007) Vol. 8, pp. 69. Electronic Publication:
      2007-10-01.
      Journal code: 101090633. E-ISSN: 1465-993X.
      Report No.: NLM-PMC2164949.
CY   England: United Kingdom
DT   Journal; Article; (JOURNAL ARTICLE)
LA   English
FS   Priority Journals
EM   200801
ED   Entered STN: 29 Dec 2007
      Last Updated on STN: 24 Jan 2008
      Entered Medline: 23 Jan 2008
AB   BACKGROUND: Deleted in Malignant Brain Tumors 1 (DMBT1) is a secreted
      scavenger receptor cysteine-rich protein that binds various bacteria and
      is thought to participate in innate pulmonary host defense. We
      hypothesized that pulmonary DMBT1 could contribute to respiratory distress
      syndrome in neonates by modulating surfactant function. METHODS: DMBT1
      expression was studied by immunohistochemistry and mRNA in situ
      hybridization in post-mortem lungs of preterm and full-term neonates with
      pulmonary hyaline membranes. The effect of human recombinant DMBT1 on the
      function of bovine and porcine surfactant was measured by a capillary
      surfactometer. DMBT1-levels in tracheal aspirates of ventilated preterm
      and term infants were determined by ELISA. RESULTS: Pulmonary DMBT1 was
      localized in hyaline membranes during respiratory distress syndrome. In

vitro addition of human recombinant DMBT1 to the surfactants increased
surface tension in a dose-dependent manner. The DMBT1-mediated effect was
reverted by the addition of calcium depending on the surfactant
preparation. CONCLUSION: Our data showed pulmonary DMBT1 expression in
hyaline membranes during respiratory distress syndrome and demonstrated
that DMBT1 increases lung surface tension in vitro. This raises the
possibility that DMBT1 could antagonize surfactant supplementation in
respiratory distress syndrome and could represent a candidate target
molecule for therapeutic intervention in neonatal lung disease.

L10   ANSWER 8 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
AN   2007:1398177 CAPLUS <<LOGINID::20090423>>
DN   148:446649
TI   Deleted in Malignant Brain Tumors 1 (DMBT1) is present in hyaline
      membranes and modulates surface tension of surfactant
AU   Mueller, Hanna; End, Caroline;   ***Renner, Marcus*** ; Helmke, Burkhard
      M.; Gassler, Nikolaus; Weiss, Christel; Hartl, Dominik; Griese, Matthias;
      Hafner, Mathias; Poustka, Annemarie; Mollenhauer, Jan; Poeschl, Johannes
CS   Division of Neonatology, Department of Pediatrics, University of
      Heidelberg, Heidelberg, 69120, Germany
SO   Respiratory Research (2007), 8(1), No pp. given
      CODEN: RREEBZ; ISSN: 1465-993X
      URL: http://respiratory-research.com/content/pdf/1465-9921-8-69.pdf
PB   BioMed Central Ltd.
DT   Journal; (online computer file)
LA   English
AB   Background: Deleted in Malignant Brain Tumors 1 (DMBT1) is a secreted
      scavenger receptor cysteine-rich protein that binds various bacteria and
      is thought to participate in innate pulmonary host defense. The authors
      hypothesized that pulmonary DMBT1 could contribute to respiratory distress
      syndrome in neonates by modulating surfactant function. Methods: DMBT1
      expression was studied by immunohistochem. and mRNA in situ hybridization
      in post-mortem lungs of preterm and full-term neonates with pulmonary
      hyaline membranes. The effect of human recombinant DMBT1 on the function
      of bovine and porcine surfactant was measured by a capillary
      surfactometer. DMBT1-levels in tracheal aspirates of ventilated preterm
      and term infants were detd. by ELISA. Results: Pulmonary DMBT1 was
      localized in hyaline membranes during respiratory distress syndrome. In
      vitro addn. of human recombinant DMBT1 to the surfactants increased
      surface tension in a dose-dependent manner. The DMBT1-mediated effect was
      reverted by the addn. of calcium depending on the surfactant prepn.
      Conclusions: The data showed pulmonary DMBT1 expression in hyaline
      membranes during respiratory distress syndrome and demonstrated that DMBT1
      increases lung surface tension in vitro. This raises the possibility that
      DMBT1 could antagonize surfactant supplementation in respiratory distress
      syndrome and could represent a candidate target mol. for therapeutic
      intervention in neonatal lung disease.
RE.CNT 41   THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10   ANSWER 9 OF 17 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 7
AN   2006:604365 BIOSIS <<LOGINID::20090423>>
DN   PREV200600609765
TI   Molecular characterization of the porcine deleted in malignant brain
      tumors 1 gene (DMBT1).
AU   Haase, Bianca; Humphray, Sean J.; Lyer, Stefan;   ***Renner, Marcus*** ;

Poustka, Annemarie; Mollenhauer, Jan; Leeb, Tosso [Reprint Author]
CS   Univ Bern, Vetsuisse Fac, Inst Genet, Bremgartenstr 109A, CH-3001 Bern,
        Switzerland
        Tosso.Leeb@itz.unibe.ch
SO   Gene (Amsterdam), (JUL 19 2006) Vol. 376, No. 2, pp. 184-191.
        CODEN: GENED6. ISSN: 0378-1119.
DT   Article
LA   English
ED   Entered STN: 15 Nov 2006
        Last Updated on STN: 15 Nov 2006
AB   The human gene deleted in malignant brain tumors 1 (DMBT1) is considered
        to play a role in tumorigenesis and pathogen defense. It encodes a
        protein with multiple scavenger receptor cysteine-rich (SRCR) domains,
        which are involved in recognition and binding of a broad spectrum of
        bacterial pathogens. The SRCR domains are encoded by highly homologous
        repetitive exons, whose number in humans may vary from 8 to 13 due to
        genetic polymorphism. Here, we characterized the porcine DMBTI gene on
        the mRNA and genomic level. We assembled a 4.5 kb porcine DMBT1 cDNA
        sequence from RT-PCR amplified seminal vesicle RNA. The porcine DMBT1
        cDNA contains an open reading frame of 4050 nt. The transcript gives rise
        to a putative polypeptide of 1349 amino acids with a calculated mass of
        147.9 kDa. Compared to human DMBT1, it contains only four N-terminal SRCR
        domains. Northern blotting revealed transcripts of similar to 4.7 kb in
        size in the tissues analyzed. Analysis of ESTs suggested the existence of
        secreted and transmembrane variants. The porcine DMBT1 gene spans about
        54 kb on chromosome 14q28-q29. In contrast to the characterized cDNA, the
        genomic BAC clone only contained 3 exons coding for N-terminal SRCR
        domains. In different mammalian DMBT1 orthologs large interspecific
        differences in the number of SRCR exons and utilization of the
        transmembrane exon exist. Our data suggest that the porcine DMBT1 gene
        may share with the human DMBT1 gene additional intraspecific variations in
        the number of SRCR-coding exons. (c) 2006 Elsevier B.V. All rights
        reserved.

L10   ANSWER 10 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
AN   2005:953991 CAPLUS <<LOGINID::20090423>>
DN   143:260332
TI   Use of DMBT1 protein for capturing sulfate and phosphate groups exposed in
        disease-associated agents
IN   Mollenhauer, Jan; End, Caroline; Blaich, Stephanie; Bergmann, Gaby;
          Renner, Marcus ; Lyer, Stefan; Wittig, Rainer; Poustka, Annemarie;
        Bikker, Floris; Ligtenberg, Anton; Nieuw-Amerongen, Arie; Veerman, Enno
PA   Deutsches Krebsforschungszentrum Stiftung des Oeffentlichen Rechts,
        Germany
SO   Eur. Pat. Appl., 57 pp.
        CODEN: EPXXDW
DT   Patent
LA   English
FAN.CNT 1
        PATENT NO.   KIND   DATE   APPLICATION NO.   DATE
        --------------   ----   --------   -------------------   --------
PI   EP 1568374   A1   20050831   EP 2004-4281   20040225
           R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
               IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
        WO 2005079834   A1   20050901   WO 2005-EP1994   20050225
        WO 2005079834   A9   20051027
           W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,

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              CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
              GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
              LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
              NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
              TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
          RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
              AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
              EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
              RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
              MR, NE, SN, TD, TG
      EP 1727558           A1    20061206    EP 2005-732131         20050225
          R:  AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
              IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
      US 20080234185       A1    20080925    US 2006-590657         20060825
PRAI  EP 2004-4281         A     20040225
      WO 2005-EP1994       W     20050225
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AB   Disclosed is the use of DMBT1, or of the nucleic acid encoding it, for the
      manuf. of a medicament for the treatment of a patient suffering from a
      disease caused by an agent which possesses at least one accessible sulfate
      and/or at least one accessible phosphate group. DMBT1 may also be used as
      a diagnostic for diagnosing the susceptibility of an individual to sulfate
      or phosphate groups, as well in methods for diagnosis, prophylaxis or
      treatment of diseases caused by an agent which possesses at least one
      accessible sulfate and/or at least one accessible phosphate group. The
      invention is based on the discovery that human protein DMBT1 (Deleted in
      Malignant Brain Tumors 1) is a dual-specific pattern recognition receptor
      for non-self (bacterial cell wall components, gp120 of HIV, damage-,
      inflammation-, and cancer-causing sulfated carbohydrates) and self
      structures (DNA, phospholipids, cell surface and extracellular matrix
      carbohydrates), which interacts with accessible sulfate and or phosphate
      groups, which are present on numerous compds., compns., and organisms.
      Pattern recognition of DMBT1 is mediated via an 11-amino acid motif
      (GRVEVLYRGSW) that binds sulfate and phosphate groups. By acting as a
      dual-specific PRR, DMBT1 may exert a general insulator function against a
      broad range of pathogens, which predicts a contribution of DMBT1 germline
      deletions to human susceptibility to infection, inflammation, and cancer.
      Furthermore, a 40% decreased level of DMBT1 in male mice correlates with
      an increased susceptibility and with a deficient protection against
      dextran sulfate sodium-induced tissue damage and inflammation in the
      colon.
      RE.CNT 7   THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
                    ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10   ANSWER 11 OF 17 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 8
AN   2005:324157 BIOSIS <<LOGINID::20090423>>
DN   PREV200510117337
TI   Generation of a vector system facilitating cloning of DMBT1 variants and
      recombinant expression of functional full-length DMBT1.
AU   End, Caroline; Lyer, Stefan;   ***Renner, Marcus*** ; Stahl, Cordula;
      Ditzer, Jutta; Holloschi, Andreas; Kuhn, Hella-M.; Flammann, Heiko T.;
      Poustka, Annemarie; Hafner, Mathias; Mollenhauer, Jan [Reprint Author];
      Kioschis, Petra
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, Neuenheimer Feld 280,
      D-69120 Heidelberg, Germany
      j.mollenhauer@dkfz.de
SO   Protein Expression and Purification, (JUN 2005) Vol. 41, No. 2, pp.

DT   Article
LA   English
ED   Entered STN: 25 Aug 2005
     Last Updated on STN: 25 Aug 2005
AB   Deleted in malignant brain tumours 1 (DMBT1) codes for a similar to 340
     kDa glycoprotein with highly repetitive scavenger receptor cysteine-rich
     (SRCR) domains. DMBT1 was implicated in cancer. defence against viral and
     bacterial infections, and differentiation of epithelial cells.
     Recombinant expression and purification of DMBT1 is an essential step for
     systematic standardized functional research and towards the evaluation of
     its therapeutical potential. So far, DMBT1 is obtained from natural
     sources such as bronchioalveolar lavage or saliva, resulting in time
     consuming sample collection, low yields, and protein preparations which
     may substantially vary due to differential processing and genetic
     polymorphism, all of which impedes functional research on DMBT1. Cloning
     of DMBT1 cDNAs is hampered because of the size and the 13 highly
     homologous SRCR exons. In this Study, we report oil the setup of a vector
     system that facilitates cloning of DMBT1 variants. We demonstrate
     applicability of the vector system by expression of the largest DMBT1
     variant in a tetracycline-inducible mammalian expression system using the
     Chinese hamster ovary cell line. Yields Lip to 30 mg rDMBT1 per litre of
     cell Culture supernatant could be achieved with an optimized production
     procedure. By harnessing the specific bacteria-binding property of DMBT1
     we established an affinity purification procedure which allows the
     isolation of more than 3 mg rDMBT1 with a Purity of about 95 %. Although
     the glycosylation moieties of rDMBT1 are different front DMBT1(SAG)
     isolated front saliva, we demonstrate that rDMBT1 is functionally active
     in aggregating Gram-positive and Gram-negative bacteria and binding to C1q
     and lactoferrin, which represent two known endogenous DMBT1 ligands. (c)
     2005 Elsevier Inc. All rights reserved.

AN   2005:69186 BIOSIS <<LOGINID::20090423>>
DN   PREV200500070157
TI   Bacteria binding by DMBT1/SAG/gp-340 is confined to the VEVLXXXXW motif in
     its scavenger receptor cysteine-rich domains.
AU   Bikker, Floris J.; Ligtenberg, Antoon J. M. [Reprint Author]; End,
     Caroline;   ***Renner, Marcus*** ; Blaich, Stephanie; Lyer, Stefan;
     Wittig, Rainer; van't Hof, Wim; Veerman, Enno C. I.; Nazmi, Kamran; De
     Blieck-Hogervorst, Jolanda M. A.; Kioschis, Petra; Amerongen, Arie V.
     Nieuw; Poustka, Annemarie; Mollenhauer, Jan
CS   Acad Ctr Dent AmsterdamDept Oral Biochem, Free Univ Amsterdam,
     Boechorststr 7, NL-1081 BT, Amsterdam, Netherlands
     ajm.ligtenberg@vumc.nl
SO   Journal of Biological Chemistry, (November 12 2004) Vol. 279, No. 46, pp.
     47699-47703. print.
     CODEN: JBCHA3. ISSN: 0021-9258.
DT   Article
LA   English
ED   Entered STN: 16 Feb 2005
     Last Updated on STN: 16 Feb 2005
AB   The scavenger receptor cysteine-rich (SRCR) proteins form an archaic group
     of metazoan proteins characterized by the presence of SRCR domains. These
     proteins are classified in group A and B based on the number of conserved

cysteine residues in their SRCR domains, i.e. six for group A and eight for group B. The protein DMBT1 (deleted in malignant brain tumors 1), which is identical to salivary agglutinin and lung gp-340, belongs to the group B SRCR proteins and is considered to be involved in tumor suppression and host defense by pathogen binding. In a previous study we used non-overlapping synthetic peptides covering the SRCR consensus sequence to identify a 16-amino acid bacteria-binding protein loop (peptide SRCRP2; QGRVEVLYRGSWGTVC) within the SRCR domains. In this study, using overlapping peptides, we pinpointed the minimal bacteria-binding site on SRCRP2, and thus DMBT1, to an 11-amino acid motif (DMBT1 pathogen-binding site 1 or DMBT1pbs1; GRVEVLYRGSW). An alanine substitution scan revealed that VEVL and Trp are critical residues in this motif. Bacteria binding by DMBT1pbs1 was different from the bacteria binding by the macrophage receptor MARCO in which an RXR motif was critical. In addition, the homologous consensus sequences of a number of SRCR proteins were synthesized and tested for bacteria binding. Only consensus sequences of DMBT1 orthologues bound bacteria by this motif.

L10 ANSWER 13 OF 17 SCISEARCH COPYRIGHT (c) 2009 The Thomson Corporation on STN
AN   2009:102902 SCISEARCH <<LOGINID::20090423>>
GA   The Genuine Article (R) Number: V80CV
TI   THE PUTATIVE TUMOR SUPPRESSOR DMBT1 CONFERS MUCOSAL PROTECTION IN VIVO AND INHIBITS BACTERIAL INFECTION IN VITRO
AU   ***Renner, Marcus (Reprint)*** ; Bergmann, Gaby; Krebs, Inge; Lyer, Stefan; End, Caroline; Sina, Christian; Freidekind, Olga; Poustka, Annemarie; Mollenhauer, Jan
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, D-69120 Heidelberg, Germany
AU   End, Caroline; Kioschis, Petra; Haffner, Mathias
CS   Univ Appl Sci Mannheim, Inst Mol Biol & Cell Culture Technol, D-68163 Mannheim, Germany
AU   Helmke, Burkhard; Gassler, Nikolaus; Autschbach, Frank
CS   Univ Heidelberg, Inst Pathol, D-69120 Heidelberg, Germany
AU   Sina, Christian; Rosenstiel, Philip; Schreiber, Stefan
CS   Univ Hosp Schleswig Holstein, Dept Med 1, D-24105 Kiel, Germany
AU   Reinhard, Claudia; Stoeger, Tobias; Schulz, Holger
CS   Natl Ctr Environm & Hlth GmbH, Inst Inhalat Biol, D-85764 Neuherberg, Germany
AU   Hilberg, Frank
CS   Boehringer Ingelheim Austria, NCE Pharmacol, R&D Vienna, A-1121 Vienna, Austria
CYA Germany; Austria
SO   ANTICANCER RESEARCH, (SEP-OCT 2004) Vol. 24, No. 5D, pp. 3610-3611. MA 422.
     ISSN: 0250-7005.
PB   INT INST ANTICANCER RESEARCH, EDITORIAL OFFICE 1ST KM KAPANDRITIOU-KALAMOU RD KAPANDRITI, PO BOX 22, ATHENS 19014, GREECE.
DT   Conference; Journal
LA   English
REC Reference Count: 0
ED   Entered STN: 29 Jan 2009
     Last Updated on STN: 29 Jan 2009

L10 ANSWER 14 OF 17 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN   DUPLICATE 10
AN   2004:130519 BIOSIS <<LOGINID::20090423>>

TI   Carcinogen inducibility in vivo and down-regulation of DMBT1 during breast
      carcinogenesis.
AU   Mollenhauer, Jan [Reprint Author]; Helmke, Burkhard; Medina, Daniel;
      Bergmann, Gaby; Gassler, Nikolaus; Mueller, Hanna; Lyer, Stefan;
      Diedrichs, Laura;   ***Renner, Marcus*** ; Wittig, Rainer; Blaich,
      Stephanie; Hamann, Ute; Madsen, Jens; Holmskov, Uffe; Bikker, Floris;
      Ligtenberg, Antoon; Carlen, Anette; Olsson, Jan; Otto, Herwart F.;
      O'Malley, Bert; Poustka, Annemarie
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
      Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
      j.mollenhauer@dkfz-heidelberg.de; j.mollenhauer@dkfz-heidelberg.de
AB   Deleted in malignant brain tumors 1 (DMBT1) has been proposed as a
      candidate tumor suppressor for brain and epithelial cancer. Initial
      studies suggested loss of expression rather than mutation as the
      predominant mode of DMBT1 inactivation. However, in situ studies in lung
      cancer demonstrated highly sophisticated changes of DMBT1 expression and
      localization, pointing to a chronological order of events. Here we report
      on the investigation of DMBT1 in breast cancer in order to test whether
      these principles might also be attributable to other tumor types.
      Comprehensive mutational analyses did not uncover unambiguous inactivating
      DMBT1 mutations in breast cancer. Expression analyses in the human and
      mouse mammary glands pointed to the necessity of DMBT1 induction. While
      age-dependent and hormonal effects could be ruled out, 9 of 10 mice showed
      induction of Dmbt1 expression after administration of the carcinogen
      7,12-dimethybenz(alpha)anthracene prior to the onset of tumorigenesis or
      other histopathological changes. DMBT1 displayed significant
      up-regulation in human tumor-flanking tissues compared to in normal breast
      tissues (P < 0.05). However, the breast tumor cells displayed a switch
      from lumenal secretion to secretion to the extracellular matrix and a
      significant down-regulation compared to that in matched normal flanking
      tissues (P < 0.01). We concluded that loss of expression also is the
      predominant mode of DMBT1 inactivation in breast cancer. The dynamic
      behavior of DMBT1 in lung carcinoma is fully reflected in breast cancer,
      which suggests that this behavior might be common to tumor types arising
      from monolayered epithelia.

TI   Spin- and charge excitations of the triangular Hubbard-model: a FLEX-study
AU   ***Renner, Marcus*** ; Brenig, Wolfram
CS   Inst. Theoretische Phys., Technische Univ. Braunschweig, Braunschweig,
      38106, Germany

LA   English
AB   A study of the quasi-particle excitations and spin fluctuations in the
     one-band Hubbard-model on the triangular lattice with nearest- and
     next-nearest-neighbor hopping is presented. Using the
     fluctuation-exchange-approxn. (FLEX) results for the quasi-particle
     dispersion and life-time, the Fermi surface, and the static spin structure
     factor will be discussed for a wide range of dopings and as a function of
     the Coulomb correlation strength U. It is shown that the renormalization
     of the spin- and charge-dynamics is sensitive to the interplay between van
     Hove singularity-effects and the nesting, which is influenced by the
     next-nearest-neighbor hopping. For all dopings investigated, the
     energy-dependence of the quasi-particle life time is found to be of
     conventional Fermi-liq. nature. At intermediate correlation strength the
     static structure factor is strongly doping dependent, with a large
     commensurate peak at the K-point for 1.35 electrons per site and weak,
     incommensurate intensities occurring at lower electron densities. The
     relevance of this model to the recently discovered cobaltates
     NaxCoO2.cntdot.yH2O will be discussed.
RE.CNT 27   THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
AN   2005:1158877 CAPLUS <<LOGINID::20090423>>
DN   143:396924
TI   The Hubbard model on the anisotropic and isotropic triangular lattice in
     the fluctuation exchange approximation
AU   ***Renner, Marcus***
CS   Germany
SO   (2003) No pp. given Avail.: Metadata on Internet Documents, Order No.
     26307
     From: Metadata Internet Doc. [Ger. Diss.] 2003, (D1028-1), No pp. given
     URL: http://www.meind.de/search.py?recid=26307
DT   Dissertation
LA   German
AB   Unavailable

L10 ANSWER 17 OF 17 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
     STN
AN   2003:584033 BIOSIS <<LOGINID::20090423>>
DN   PREV200300583256
TI   The potential functional dualism of DMBT1: Epithelial differentiation and
     pathogen-binding.
AU   Mollenhauer, Jan [Reprint Author]; Bikker, Floris; Helmke, Burkhard;
     Kollender, Gaby [Reprint Author]; Lyer, Stefan [Reprint Author];
        Renner, Marcus   [Reprint Author]; Ligtenberg, Antoon; Madsen,
Jens;
     Holmskov, Uffe; Otto, Herwart F.; Poustka, Annemarie [Reprint Author]
CS   Department for Molecular Genome Analysis, Deutsches
     Krebsforschungszentrum, Heidelberg, Germany
SO   International Journal of Molecular Medicine, (2003) Vol. 12, No.
     Supplement 1, pp. S9. print.
     Meeting Info.: 8th World Congress on Advances in Oncology and 6th
     International Symposium on Molecular Medicine. Crete, Greece. October
     16-18, 2003.
     ISSN: 1107-3756 (ISSN print).
DT   Conference; (Meeting)
     Conference; Abstract; (Meeting Abstract)

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=> e lyer stefan/au
E1          2     LYER SRIRAM S/AU
E2          1     LYER ST/AU
E3         52 --> LYER STEFAN/AU
E4          2     LYER STEPHAN/AU
E5          1     LYER SUBRAMANIAN S/AU
E6          2     LYER SUHASINI/AU
E7          2     LYER SUNIL S/AU
E8          1     LYER SURESH/AU
E9          2     LYER SURI S/AU
E10         4     LYER V/AU
E11         1     LYER V K/AU
E12         3     LYER V N/AU

=> s e2-e4 and dmbt?
L11        41 ("LYER ST"/AU OR "LYER STEFAN"/AU OR "LYER STEPHAN"/AU) AND DMBT
              ?

=> dup rem l11
PROCESSING COMPLETED FOR L11
L12          13 DUP REM L11 (28 DUPLICATES REMOVED)

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 13 ANSWERS - CONTINUE? Y/(N):y
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L12   ANSWER 1 OF 13   CAPLUS   COPYRIGHT 2009 ACS on STN DUPLICATE 1
AN   2009:402136   CAPLUS <<LOGINID::20090423>>
DN   150:327861
TI   ***DMBT1***   functions as pattern-recognition molecule for
      poly-sulfated and poly-phosphorylated ligands
AU   End, Caroline; Bikker, Floris; Renner, Marcus; Bergmann, Gaby;
Lyer,
   ***   Stefan*** ; Blaich, Stephanie; Hudler, Melanie; Helmke, Burkhard;
      Gassler, Nikolaus; Autschbach, Frank; Ligtenberg, Antoon J. M.; Benner,
      Axel; Holmskov, Uffe; Schirmacher, Peter; Nieuw Amerongen, Arie V.;
      Rosenstiel, Philip; Sina, Christian; Franke, Andre; Hafner, Mathias;
      Kioschis, Petra; Schreiber, Stefan; Poustka, Annemarie; Mollenhauer, Jan
CS   Division of Molecular Genome Analysis, German Cancer Research Center,
      Heidelberg, Germany
SO   European Journal of Immunology (2009), 39(3), 833-842
      CODEN: EJIMAF; ISSN: 0014-2980
PB   Wiley-VCH Verlag GmbH & Co. KGaA
DT   Journal
LA   English
AB   Deleted in malignant brain tumors 1 (***DMBT1***) is a secreted
      glycoprotein displaying a broad bacterial-binding spectrum. Recent
      functional and genetic studies linked   ***DMBT1***   to the suppression
      of LPS-induced TLR4-mediated NF-.kappa.B activation and to the
      pathogenesis of Crohn's disease. Here, the authors aimed at unraveling
      the mol. basis of its function in mucosal protection and of its broad
      pathogen-binding specificity. The authors report that   ***DMBT1***
      directly interacts with dextran sulfate sodium (DSS) and carrageenan, a

structurally similar sulfated polysaccharide, which is used as a
texturizer and thickener in human dietary products. However, binding of
   DMBT1   does not reduce the cytotoxic effects of these agents to
intestinal/epithelial cells in vitro. DSS and carrageenan compete for
   DMBT1   -mediated bacterial aggregation via interaction with its
bacterial-recognition motif. Competition and ELISA studies identify
poly-sulfated and poly-phosphorylated structures as ligands for this
recognition motif, such as heparan sulfate, LPS, and lipoteichoic acid.
Dose-response studies in   ***Dmbt1***   -/- and   ***Dmbt1***   +/+ mice
utilizing the DSS-induced colitis model demonstrate a differential
response only to low but not to high DSS doses. The authors propose that
   DMBT1   functions as pattern-recognition mol. for poly-sulfated and
poly-phosphorylated ligands providing a mol. basis for its broad
bacterial-binding specificity and its inhibitory effects on LPS-induced
TLR4-mediated NF-.kappa.B activation.

L12 ANSWER 2 OF 13 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
     DUPLICATE 2
AN   2007:440147 BIOSIS <<LOGINID::20090423>>
DN   PREV200700436905
TI   Regulation of   ***DMBT1***   via NOD2 and TLR4 in intestinal epithelial
     cells modulates bacterial recognition and invasion.
AU   Rosenstiel, Philip; Sina, Christian; End, Caroline; Renner, Marcus;
        Lyer, Stefan   ; Till, Andreas; Hellmig, Stephan; Nikolaus, Susanna;
     Foelsch, Ulrich R.; Helmke, Burkhard; Autschbach, Frank; Schirmacher,
     Peter; Kioschis, Petra; Hafner, Mathias; Poustka, Annemarie; Mollenhauer,
     Jan; Schreiber, Stefan [Reprint Author]
CS   Univ Hosp Schleswig Holstein, Inst Clin Mol Biol, Campus
     Kiel,Schittenhelmstrache 12, Kiel, Germany
     s.schreiber@mucosa.de
SO   Journal of Immunology, (JUN 15 2007) Vol. 178, No. 12, pp. 8203-8211.
     CODEN: JOIMA3. ISSN: 0022-1767.
DT   Article
LA   English
ED   Entered STN: 15 Aug 2007
     Last Updated on STN: 15 Aug 2007
AB   Mucosal epithelial cell layers are constantly exposed to a complex
     resident microflora. Deleted in malignant brain tumors 1 (***DMBT1***
) belongs to the group of secreted scavenger receptor cysteine-rich
     proteins and is considered to be involved in host defense by pathogen
     binding. This report describes the regulation and function of
        DMBT1   in intestinal epithelial cells, which form the primary
     immunological barrier for invading pathogens. We report that intestinal
     epithelial cells up-regulate   ***DMBT1***   upon proinflammatory stimuli
     (e.g., TNF-alpha, LPS). We demonstrate that   ***DMBT1***   is a target
     gene for the intracellular pathogen receptor NOD2 via NF-kappa B
     activation.   ***DMBT1***   is strongly up-regulated in the inflamed
     intestinal mucosa of Crohn's disease patients with wild-type, but not with
     mutant NOD2. We show that   ***DMBT1***   inhibits cytoinvasion of
     Salmonella enterica and LPS- and muramyl dipeptide-induced NF-kappa B
     activation and cytokine secretion in vitro. Thus,   ***DMBT1***   may
     play an important role in the first line of mucosal defense conferring
     immune exclusion of bacterial cell wall components. Dysregulated
     intestinal   ***DMBT1***   expression due to mutations in the NOD2/CARD15
     gene may be part of the complex pathophysiology of barrier dysfunction in
     Crohn's disease.

AN   2008:112593 BIOSIS <<LOGINID::20090423>>
DN   PREV200800114726
TI   ***DMBT1***   confers mucosal protection in vivo and a deletion variant
      is associated with Crohn's disease.
AU   Renner, Marcus; Bergmann, Gaby; Krebs, Inge; End, Caroline;   ***Lyer,***
  ***   Stefan***   ; Hilberg, Frank; Helmke, Burkhard; Gassler, Nikolaus;
      Autschbach, Frank; Bikker, Floris; Strobel-Freidekind, Olga; Gronert-Sum,
      Sabine; Benner, Axel; Blaich, Stephanie; Wittig, Rainer; Hudler, Melanie;
      Ligtenberg, Antoon J.; Madsen, Jens; Holmskov, Uffe; Annese, Vito;
      Latiano, Anna; Schirmacher, Peter; Amerongen, Arie V. Nieuw; D'Amato,
      Mauro; Kioschis, Petra; Hafner, Mathias; Poustka, Annemarie; Mollenhauer,
      Jan [Reprint Author]
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, Neuenheimer Feld 280,
      D-69120 Heidelberg, Germany
      j.mollenhauer@dkfz.de
SO   Gastroenterology, (NOV 2007) Vol. 133, No. 5, pp. 1499-1509.
      CODEN: GASTAB. ISSN: 0016-5085.
DT   Article
LA   English
ED   Entered STN: 13 Feb 2008
      Last Updated on STN: 13 Feb 2008
AB   Background & Aims: Impaired mucosal. defense plays an important role in
      the pathogenesis of Crohn's disease (CD), one of the main subtypes of
      inflammatory bowel disease (IBD). Deleted in malignant brain tumors 1(
        DMBT1) is a secreted scavenger receptor cysteine-rich protein
with
      predominant expression in. the intestine and has been proposed to exert
      possible functions in regenerative processes and pathogen defense. Here,
      we aimed at analyzing the role of   ***DMBT1***   in IBD. Methods: We
      studied   ***DMBT1***   expression in IBD and normal tissues by
      quantitative reverse transcription-polymerase chain reaction,
      immunohistochemistry, and mRNA in situ hybridization. Genetic
      polymorphisms within   ***DMBT1***   were analyzed in an Italian IBD
      case-control sample.   ***Dmbt1*** (-/-) mice were generated,
      characterized, and analyzed for their susceptibility to dextran sulfate
      sodium-induced colitis. Results: ***DMBT1***   levels correlate with
      disease activity in inflamed IBD tissues. A highly significant fraction
      of the patients with IBD displayed up-regulation of   ***DMBT1***
      specifically in the intestinal epithelial surface cells and Paneth cells.
      A deletion allele of   ***DMBT1***   with a reduced: number of scavenger
      receptor cysteine-rich domain coding exons is associated with an increased
      risk of CD (P =.00056; odds ratio, 1.75) but not for ulcerative colitis.
        Dmbt1 (-/-) mice display enhanced susceptibility to dextran
sulfate
      sodium-induced colitis and elevated Tnf, Il6, and Nod2 expression levels
      during inflammation. Conclusions: ***DMBT1***   may play a role in
      intestinal mucosal protection and prevention of inflammation. Impaired
        DMBT1   function may contribute to the pathogenesis of CD.

AN   2007:601740 BIOSIS <<LOGINID::20090423>>
DN   PREV200700605050
TI   ***Dmbt1***   is a target gene of NOD2/CARD15 and protects intestinal
      epithelial cells from bacterial invasion.

AU   Rosenstiel, Philip; Sina, Christian; Hellmig, Stephan; Nikolaus, Susanna;
      End, Caroline; Renner, Markus;   ***Lyer, Stephan*** ; Helmke, Burkhard;
      Hafner, Mathias; Poustka, Annemarie; Mollenhauer, Jan; Schreiber, Stefan
DT   Conference; (Meeting)
      Conference; Abstract; (Meeting Abstract)
LA   English
ED   Entered STN: 6 Dec 2007
      Last Updated on STN: 6 Dec 2007
AB   Background&Aims: Mucosal epithelial cell layers are constantly exposed to
      a complex resident microflora.   ***DMBT1***   (deleted in malignant
      brain tumors 1) belongs to the group of secreted scavenger receptor
      cysteine-rich (SRCR) proteins and is considered to be involved in host
      defense by pathogen binding. This report describes the regulation and
      function of   ***DMBT1***   in intestinal epithelial cells, which form the
      primary immunological barrier for invading pathogens.Methods:Expression of
       DMBT1   was determined by Taqman real time PCR, Western blot and
      immunohistochemistry. Promotorstudies were performed using luciferase
      reporter gene experiments. Bacterial invasion was tested by gentamicin
      protection assay and siRNA approaches. Results: We demonstrate that
       DMBT1   is a target gene for the intracellular pathogen receptor
      NOD2 via NF-KB activation,   ***DMBT1***   is strongly upregulated in the
      inflamed intestinal mucosa of Crohn disease patients with wild-type, but
      not with mutant NOD2. We show that   ***DMBT1***   inhibits cytoinvasion
      of Salmonella enterica and LPS-induced Toll-like receptor 4 signalling.
      Silencing of   ***DMBT1***   in intestinal epithelial cells leads to an
      increased invasion of bacteria. Conclusions: ***DMBT1***   may play an
      important role in the first line of mucosal defense conferring immune
      exclusion of bacterial cell wall components. Dysregulated intestinal
       DMBT1   expression due to mutations in the NOD2/CARD15 gene may be
      part of the complex pathophysiology of barrier dysfunction in Crohn
      disease.

L12   ANSWER 5 OF 13 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 5
AN   2006:604365 BIOSIS <<LOGINID::20090423>>
DN   PREV200600609765
TI   Molecular characterization of the porcine deleted in malignant brain
      tumors 1 gene (***DMBT1***).
AU   Haase, Bianca; Humphray, Sean J.;   ***Lyer, Stefan*** ; Renner, Marcus;
      Poustka, Annemarie; Mollenhauer, Jan; Leeb, Tosso [Reprint Author]
CS   Univ Bern, Vetsuisse Fac, Inst Genet, Bremgartenstr 109A, CH-3001 Bern,
      Switzerland
      Tosso.Leeb@itz.unibe.ch
DT   Article
LA   English
ED   Entered STN: 15 Nov 2006
      Last Updated on STN: 15 Nov 2006
AB   The human gene deleted in malignant brain tumors 1 (***DMBT1***) is
      considered to play a role in tumorigenesis and pathogen defense. It

encodes a protein with multiple scavenger receptor cysteine-rich (SRCR)
domains, which are involved in recognition and binding of a broad spectrum
of bacterial pathogens. The SRCR domains are encoded by highly homologous
repetitive exons, whose number in humans may vary from 8 to 13 due to
genetic polymorphism. Here, we characterized the porcine   ***DMBTI***
gene on the mRNA and genomic level. We assembled a 4.5 kb porcine
   DMBT1   cDNA sequence from RT-PCR amplified seminal vesicle RNA.
The porcine   ***DMBT1***   cDNA contains an open reading frame of 4050
nt. The transcript gives rise to a putative polypeptide of 1349 amino
acids with a calculated mass of 147.9 kDa. Compared to human
   DMBT1 , it contains only four N-terminal SRCR domains. Northern
blotting revealed transcripts of similar to 4.7 kb in size in the tissues
analyzed. Analysis of ESTs suggested the existence of secreted and
transmembrane variants. The porcine   ***DMBT1***   gene spans about 54
kb on chromosome 14q28-q29. In contrast to the characterized cDNA, the
genomic BAC clone only contained 3 exons coding for N-terminal SRCR
domains. In different mammalian   ***DMBT1***   orthologs large
interspecific differences in the number of SRCR exons and utilization of
the transmembrane exon exist. Our data suggest that the porcine
   DMBT1   gene may share with the human   ***DMBT1***   gene
additional intraspecific variations in the number of SRCR-coding exons.
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L12 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
AN   2005:953991 CAPLUS <<LOGINID::20090423>>
DN   143:260332
TI   Use of   ***DMBT1***   protein for capturing sulfate and phosphate groups
     exposed in disease-associated agents
IN   Mollenhauer, Jan; End, Caroline; Blaich, Stephanie; Bergmann, Gaby;
     Renner, Marcus; ***Lyer, Stefan*** ; Wittig, Rainer; Poustka,
     Annemarie; Bikker, Floris; Ligtenberg, Anton; Nieuw-Amerongen, Arie;
     Veerman, Enno
PA   Deutsches Krebsforschungszentrum Stiftung des Oeffentlichen Rechts,
     Germany
SO   Eur. Pat. Appl., 57 pp.
     CODEN: EPXXDW
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.   KIND   DATE   APPLICATION NO.   DATE
     ---------------   ----   --------   --------------------   --------
PI   EP 1568374   A1   20050831   EP 2004-4281   20040225
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
     WO 2005079834   A1   20050901   WO 2005-EP1994   20050225
     WO 2005079834   A9   20051027
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
            CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
            GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
            LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
            NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
            TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
        RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
            AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
            EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
            RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
            MR, NE, SN, TD, TG

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     EP 1727558           A1    20061206    EP 2005-732131          20050225
          R:  AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
              IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
     US 20080234185        A1    20080925    US 2006-590657          20060825
PRAI EP 2004-4281          A     20040225
     WO 2005-EP1994        W     20050225
AB   Disclosed is the use of   ***DMBT1***   , or of the nucleic acid encoding
     it, for the manuf. of a medicament for the treatment of a patient
     suffering from a disease caused by an agent which possesses at least one
     accessible sulfate and/or at least one accessible phosphate group.
        ***DMBT1***   may also be used as a diagnostic for diagnosing the
     susceptibility of an individual to sulfate or phosphate groups, as well in
     methods for diagnosis, prophylaxis or treatment of diseases caused by an
     agent which possesses at least one accessible sulfate and/or at least one
     accessible phosphate group.  The invention is based on the discovery that
     human protein   ***DMBT1***   (Deleted in Malignant Brain Tumors 1) is a
     dual-specific pattern recognition receptor for non-self (bacterial cell
     wall components, gp120 of HIV, damage-, inflammation-, and cancer-causing
     sulfated carbohydrates) and self structures (DNA, phospholipids, cell
     surface and extracellular matrix carbohydrates), which interacts with
     accessible sulfate and or phosphate groups, which are present on numerous
     compds., compns., and organisms.  Pattern recognition of   ***DMBT1***
     is mediated via an 11-amino acid motif (GRVEVLYRGSW) that binds sulfate
     and phosphate groups.  By acting as a dual-specific PRR,   ***DMBT1***
     may exert a general insulator function against a broad range of pathogens,
     which predicts a contribution of   ***DMBT1***   germline deletions to
     human susceptibility to infection, inflammation, and cancer.  Furthermore,
     a 40% decreased level of   ***DMBT1***   in male mice correlates with an
     increased susceptibility and with a deficient protection against dextran
     sulfate sodium-induced tissue damage and inflammation in the colon.
RE.CNT  7     THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


L12  ANSWER 7 OF 13  BIOSIS  COPYRIGHT (c) 2009 The Thomson Corporation  on STN
     DUPLICATE 6
AN   2005:324157  BIOSIS <<LOGINID::20090423>>
DN   PREV200510117337
TI   Generation of a vector system facilitating cloning of   ***DMBT1***
     variants and recombinant expression of functional full-length
        ***DMBT1***   .
AU   End, Caroline;   ***Lyer, Stefan***  ; Renner, Marcus; Stahl, Cordula;
     Ditzer, Jutta; Holloschi, Andreas; Kuhn, Hella-M.; Flammann, Heiko T.;
     Poustka, Annemarie; Hafner, Mathias; Mollenhauer, Jan [Reprint Author];
     Kioschis, Petra
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, Neuenheimer Feld 280,
     D-69120 Heidelberg, Germany
     j.mollenhauer@dkfz.de
SO   Protein Expression and Purification, (JUN 2005) Vol. 41, No. 2, pp.
     275-286.
     CODEN: PEXPEJ. ISSN: 1046-5928.
DT   Article
LA   English
ED   Entered STN: 25 Aug 2005
     Last Updated on STN: 25 Aug 2005
AB   Deleted in malignant brain tumours 1 (   ***DMBT1***  ) codes for a similar
     to 340 kDa glycoprotein with highly repetitive scavenger receptor
     cysteine-rich (SRCR) domains.    ***DMBT1***   was implicated in cancer.
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defence against viral and bacterial infections, and differentiation of
epithelial cells. Recombinant expression and purification of
  DMBT1   is an essential step for systematic standardized functional
research and towards the evaluation of its therapeutical potential. So
far,   ***DMBT1***   is obtained from natural sources such as
bronchioalveolar lavage or saliva, resulting in time consuming sample
collection, low yields, and protein preparations which may substantially
vary due to differential processing and genetic polymorphism, all of which
impedes functional research on   ***DMBT1*** . Cloning of   ***DMBT1***
cDNAs is hampered because of the size and the 13 highly homologous SRCR
exons. In this Study, we report oil the setup of a vector system that
facilitates cloning of   ***DMBT1***   variants. We demonstrate
applicability of the vector system by expression of the largest
  DMBT1   variant in a tetracycline-inducible mammalian expression
system using the Chinese hamster ovary cell line. Yields Lip to 30 mg
rDMBT1 per litre of cell Culture supernatant could be achieved with an
optimized production procedure. By harnessing the specific
bacteria-binding property of   ***DMBT1***   we established an affinity
purification procedure which allows the isolation of more than 3 mg rDMBT1
with a Purity of about 95 %. Although the glycosylation moieties of
rDMBT1 are different front   ***DMBT1***   (SAG) isolated front saliva, we
demonstrate that rDMBT1 is functionally active in aggregating
Gram-positive and Gram-negative bacteria and binding to C1q and
lactoferrin, which represent two known endogenous   ***DMBT1***   ligands.
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L12   ANSWER 8 OF 13 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 7
AN   2005:69186 BIOSIS <<LOGINID::20090423>>
DN   PREV200500070157
TI   Bacteria binding by   ***DMBT1***   /SAG/gp-340 is confined to the
      VEVLXXXXW motif in its scavenger receptor cysteine-rich domains.
AU   Bikker, Floris J.; Ligtenberg, Antoon J. M. [Reprint Author]; End,
      Caroline; Renner, Marcus; Blaich, Stephanie;   ***Lyer, Stefan***   ;
      Wittig, Rainer; van't Hof, Wim; Veerman, Enno C. I.; Nazmi, Kamran; De
      Blieck-Hogervorst, Jolanda M. A.; Kioschis, Petra; Amerongen, Arie V.
      Nieuw; Poustka, Annemarie; Mollenhauer, Jan
CS   Acad Ctr Dent AmsterdamDept Oral Biochem, Free Univ Amsterdam,
      Boechorststr 7, NL-1081 BT, Amsterdam, Netherlands
      ajm.ligtenberg@vumc.nl
SO   Journal of Biological Chemistry, (November 12 2004) Vol. 279, No. 46, pp.
      47699-47703. print.
      CODEN: JBCHA3. ISSN: 0021-9258.
DT   Article
LA   English
ED   Entered STN: 16 Feb 2005
      Last Updated on STN: 16 Feb 2005
AB   The scavenger receptor cysteine-rich (SRCR) proteins form an archaic group
      of metazoan proteins characterized by the presence of SRCR domains. These
      proteins are classified in group A and B based on the number of conserved
      cysteine residues in their SRCR domains, i.e. six for group A and eight
      for group B. The protein   ***DMBT1***   (deleted in malignant brain
      tumors 1), which is identical to salivary agglutinin and lung gp-340,
      belongs to the group B SRCR proteins and is considered to be involved in
      tumor suppression and host defense by pathogen binding. In a previous
      study we used non-overlapping synthetic peptides covering the SRCR
      consensus sequence to identify a 16-amino acid bacteria-binding protein

loop (peptide SRCRP2; QGRVEVLYRGSWGTVC) within the SRCR domains. In this
study, using overlapping peptides, we pinpointed the minimal
bacteria-binding site on SRCRP2, and thus   ***DMBT1***   , to an 11-amino
acid motif (***DMBT1***   pathogen-binding site 1 or   ***DMBT1pbs1***
; GRVEVLYRGSW). An alanine substitution scan revealed that VEVL and Trp
are critical residues in this motif. Bacteria binding by
   DMBT1pbs1   was different from the bacteria binding by the
macrophage receptor MARCO in which an RXR motif was critical. In
addition, the homologous consensus sequences of a number of SRCR proteins
were synthesized and tested for bacteria binding. Only consensus
sequences of   ***DMBT1***   orthologues bound bacteria by this motif.

L12 ANSWER 9 OF 13 SCISEARCH COPYRIGHT (c) 2009 The Thomson Corporation on
     STN
AN   2009:102902 SCISEARCH <<LOGINID::20090423>>
GA   The Genuine Article (R) Number: V80CV
TI   THE PUTATIVE TUMOR SUPPRESSOR   ***DMBT1***   CONFERS MUCOSAL PROTECTION
     IN VIVO AND INHIBITS BACTERIAL INFECTION IN VITRO
AU   Renner, Marcus (Reprint); Bergmann, Gaby; Krebs, Inge;   ***Lyer,***
  ***   Stefan***   ; End, Caroline; Sina, Christian; Freidekind, Olga;
Poustka,
     Annemarie; Mollenhauer, Jan
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, D-69120 Heidelberg,
     Germany
AU   End, Caroline; Kioschis, Petra; Haffner, Mathias
CS   Univ Appl Sci Mannheim, Inst Mol Biol & Cell Culture Technol, D-68163
     Mannheim, Germany
AU   Helmke, Burkhard; Gassler, Nikolaus; Autschbach, Frank
CS   Univ Heidelberg, Inst Pathol, D-69120 Heidelberg, Germany
AU   Sina, Christian; Rosenstiel, Philip; Schreiber, Stefan
CS   Univ Hosp Schleswig Holstein, Dept Med 1, D-24105 Kiel, Germany
AU   Reinhard, Claudia; Stoeger, Tobias; Schulz, Holger
CS   Natl Ctr Environm & Hlth GmbH, Inst Inhalat Biol, D-85764 Neuherberg,
     Germany
AU   Hilberg, Frank
CS   Boehringer Ingelheim Austria, NCE Pharmacol, R&D Vienna, A-1121 Vienna,
     Austria
CYA Germany; Austria
SO   ANTICANCER RESEARCH, (SEP-OCT 2004) Vol. 24, No. 5D, pp. 3610-3611. MA
     422.
     ISSN: 0250-7005.
PB   INT INST ANTICANCER RESEARCH, EDITORIAL OFFICE 1ST KM KAPANDRITIOU-KALAMOU
     RD KAPANDRITI, PO BOX 22, ATHENS 19014, GREECE.
DT   Conference; Journal
LA   English
REC Reference Count: 0
ED   Entered STN: 29 Jan 2009
     Last Updated on STN: 29 Jan 2009

L12 ANSWER 10 OF 13 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
     STN   DUPLICATE 8
AN   2004:130519 BIOSIS <<LOGINID::20090423>>
DN   PREV200400116079
TI   Carcinogen inducibility in vivo and down-regulation of   ***DMBT1***
     during breast carcinogenesis.
AU   Mollenhauer, Jan [Reprint Author]; Helmke, Burkhard; Medina, Daniel;
     Bergmann, Gaby; Gassler, Nikolaus; Mueller, Hanna;   ***Lyer, Stefan***   ;

Diedrichs, Laura; Renner, Marcus; Wittig, Rainer; Blaich, Stephanie; Hamann, Ute; Madsen, Jens; Holmskov, Uffe; Bikker, Floris; Ligtenberg, Antoon; Carlen, Anette; Olsson, Jan; Otto, Herwart F.; O'Malley, Bert; Poustka, Annemarie
CS Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum, Im Neuenheimer Feld 280, 69120, Heidelberg, Germany j.mollenhauer@dkfz-heidelberg.de; j.mollenhauer@dkfz-heidelberg.de
DT Article
LA English
ED Entered STN: 3 Mar 2004
Last Updated on STN: 3 Mar 2004
AB Deleted in malignant brain tumors 1 (***DMBT1***) has been proposed as a candidate tumor suppressor for brain and epithelial cancer. Initial studies suggested loss of expression rather than mutation as the predominant mode of ***DMBT1*** inactivation. However, in situ studies in lung cancer demonstrated highly sophisticated changes of ***DMBT1*** expression and localization, pointing to a chronological order of events. Here we report on the investigation of ***DMBT1*** in breast cancer in order to test whether these principles might also be attributable to other tumor types. Comprehensive mutational analyses did not uncover unambiguous inactivating ***DMBT1*** mutations in breast cancer. Expression analyses in the human and mouse mammary glands pointed to the necessity of ***DMBT1*** induction. While age-dependent and hormonal effects could be ruled out, 9 of 10 mice showed induction of ***Dmbt1*** expression after administration of the carcinogen 7,12-dimethybenz(alpha)anthracene prior to the onset of tumorigenesis or other histopathological changes. ***DMBT1*** displayed significant up-regulation in human tumor-flanking tissues compared to in normal breast tissues (P < 0.05). However, the breast tumor cells displayed a switch from lumenal secretion to secretion to the extracellular matrix and a significant down-regulation compared to that in matched normal flanking tissues (P < 0.01). We concluded that loss of expression also is the predominant mode of ***DMBT1*** inactivation in breast cancer. The dynamic behavior of ***DMBT1*** in lung carcinoma is fully reflected in breast cancer, which suggests that this behavior might be common to tumor types arising from monolayered epithelia.

L12 ANSWER 11 OF 13 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
AN 2003:584033 BIOSIS <<LOGINID::20090423>>
DN PREV200300583256
TI The potential functional dualism of ***DMBT1*** : Epithelial differentiation and pathogen-binding.
AU Mollenhauer, Jan [Reprint Author]; Bikker, Floris; Helmke, Burkhard; Kollender, Gaby [Reprint Author]; ***Lyer, Stefan*** [Reprint Author]; Renner, Marcus [Reprint Author]; Ligtenberg, Antoon; Madsen, Jens; Holmskov, Uffe; Otto, Herwart F.; Poustka, Annemarie [Reprint Author]
CS Department for Molecular Genome Analysis, Deutsches Krebsforschungszentrum, Heidelberg, Germany
SO International Journal of Molecular Medicine, (2003) Vol. 12, No. Supplement 1, pp. S9. print.
Meeting Info.: 8th World Congress on Advances in Oncology and 6th International Symposium on Molecular Medicine. Crete, Greece. October 16-18, 2003.

DT   Conference; (Meeting)
     Conference; Abstract; (Meeting Abstract)
LA   English
ED   Entered STN: 10 Dec 2003
     Last Updated on STN: 10 Dec 2003

L12 ANSWER 12 OF 13 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
     STN   DUPLICATE 9
AN   2002:529538 BIOSIS <<LOGINID::20090423>>
DN   PREV200200529538
TI   The SRCR/SID region of   ***DMBT1***   defines a complex multi-allele
     system representing the major basis for its variability in cancer.
AU   Mollenhauer, Jan [Reprint author]; Mueller, Hanna; Kollender, Gaby;
         Lyer, Stefan   ; Diedrichs, Laura; Helmke, Burkhard; Holmskov, Uffe;
     Ligtenberg, Toon; Herbertz, Stephan; Krebs, Inge; Madsen, Jens; Bikker,
     Floris; Schmitt, Liane; Wiemann, Stefan; Scheurlen, Wolfram; Otto, Herwart
     F.; von Deimling, Andreas; Poustka, Annemarie
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
     Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
     j.mollenhauer@dkfz.de
SO   Genes Chromosomes and Cancer, (November, 2002) Vol. 35, No. 3, pp.
     242-255. print.
     CODEN: GCCAES. ISSN: 1045-2257.
DT   Article
LA   English
ED   Entered STN: 16 Oct 2002
     Last Updated on STN: 16 Oct 2002
AB   Deleted in malignant brain tumors 1 (***DMBT1***   ) at 10q25.3-q26.1 has
     been proposed as a candidate tumor-suppressor gene for brain and
     epithelial cancer.   ***DMBT1***   encodes a multifunctional mucin-like
     protein presumably involved in epithelial differentiation and protection.
     The gene consists of highly homologous and repeating exon and intron
     sequences. This specifically applies to the region coding for the
     repetitive scavenger receptor cysteine-rich (SRCR) domains and
     SRCR-interspersed domains (SIDs) that constitutes the major part of the
     gene. This particular structure may previously have interfered with the
     delineation of   ***DMBT1***   alterations in cancer. Uncovering these,
     however, is of mechanistic importance. By a combined approach, we
     conducted a detailed mutational analysis, starting from a panel of 51
     tumors, including 46 tumor cell lines and five primary tumors.
     Alterations in the repetitive region were present in 22/31 (71%) tumors
     that were investigated in detail. Six tumors showed presumably de novo
     mutations, among these three with point mutations in combination with a
     loss of heterozygosity. However, none of the alterations unambiguously
     would be predicted to lead to an inactivation of   ***DMBT1***   . We
     define seven distinct   ***DMBT1***   alleles based on variable numbers of
     tandem repeats (VNTRs). At least 11 tumors exclusively harbored these
     VNTRs. The data suggest that the SRCR/SID region defines a complex
     multi-allele system that has escaped previous analyses and that represents
     the major basis for the variability of   ***DMBT1***   in cancer.
       DMBT1   thus compares to mucins rather than to conventional tumor
     suppressors.

L12 ANSWER 13 OF 13 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
     STN   DUPLICATE 10
AN   2002:471853 BIOSIS <<LOGINID::20090423>>

```
DN    PREV200200471853
TI    Sequential changes of the    ***DMBT1***    expression and location in
      normal lung tissue and lung carcinomas.
AU    Mollenhauer, Jan [Reprint author]; Helmke, Burkhard; Mueller, Hanna;
      Kollender, Gaby;    ***Lyer, Stefan***  ; Diedrichs, Laura; Holmskov, Uffe;
      Ligtenberg, Toon; Herbertz, Stephan; Krebs, Inge; Wiemann, Stefan; Madsen,
      Jens; Bikker, Floris; Schmitt, Liane; Otto, Herwart F.; Poustka, Annemarie
CS    Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
      Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
      j.mollenhauer@dkfz.de
SO    Genes Chromosomes and Cancer, (October, 2002) Vol. 35, No. 2, pp. 164-169.
      print.
      CODEN: GCCAES. ISSN: 1045-2257.
DT    Article
LA    English
ED    Entered STN: 11 Sep 2002
      Last Updated on STN: 11 Sep 2002
AB    Deleted in Malignant Brain Tumors 1 (  ***DMBT1***  ) at chromosome region
      10q25.3-q26.1 has been proposed as a candidate tumor-suppressor gene for
      brain, digestive tract, and lung cancer.  Recent studies on its expression
      in lung cancer have led to divergent results and have raised a
      controversial discussion.  Moreover,   ***DMBT1***   has been implicated
      with epithelial protection in the respiratory tract.  We thus wondered how
      a loss of its expression could be related to carcinogenesis in the lung.
      To address these issues, we investigated the   ***DMBT1***   expression
      and location in the normal lung and lung cancer.  By reverse-transcription
      PCR, a down-regulation of the   ***DMBT1***   expression in lung cancer
      cell lines is commonly detected.  Immunohistochemical studies in situ
      demonstrate that there are also low steady-state levels of   ***DMBT1***
      in the normal respiratory epithelium.  However, an up-regulation takes
      place in the tumor-flanking epithelium and upon respiratory inflammation.
      Lung carcinomas show increased   ***DMBT1***   expression compared to that
      of undiseased lung tissue, but decreased   ***DMBT1***   levels compared
      to that of tumor-flanking and inflammatory tissue.  A switch from a
      lumenal secretion to a secretion to the extracellular matrix takes place
      during lung carcinogenesis.  Our data may resolve the controversial
      discussion on its expression in lung carcinomas.  We hypothesize that the
      changes of the   ***DMBT1***   expression and location do reflect a time
      course that may point to possible mechanisms for its role in epithelial
      cancer.


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E8          2      WITTIG RICHARD/AU
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E10         2      WITTIG ROBERT/AU
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PROCESSING COMPLETED FOR L13
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L14   ANSWER 1 OF 4 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 1
AN   2008:112593 BIOSIS <<LOGINID::20090423>>
DN   PREV200800114726
TI   ***DMBT1***   confers mucosal protection in vivo and a deletion variant
      is associated with Crohn's disease.
AU   Renner, Marcus; Bergmann, Gaby; Krebs, Inge; End, Caroline; Lyer, Stefan;
      Hilberg, Frank; Helmke, Burkhard; Gassler, Nikolaus; Autschbach, Frank;
      Bikker, Floris; Strobel-Freidekind, Olga; Gronert-Sum, Sabine; Benner,
      Axel; Blaich, Stephanie; ***Wittig, Rainer*** ; Hudler, Melanie;
      Ligtenberg, Antoon J.; Madsen, Jens; Holmskov, Uffe; Annese, Vito;
      Latiano, Anna; Schirmacher, Peter; Amerongen, Arie V. Nieuw; D'Amato,
      Mauro; Kioschis, Petra; Hafner, Mathias; Poustka, Annemarie; Mollenhauer,
      Jan [Reprint Author]
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, Neuenheimer Feld 280,
      D-69120 Heidelberg, Germany
      j.mollenhauer@dkfz.de
SO   Gastroenterology, (NOV 2007) Vol. 133, No. 5, pp. 1499-1509.
      CODEN: GASTAB. ISSN: 0016-5085.
DT   Article
LA   English
ED   Entered STN: 13 Feb 2008
      Last Updated on STN: 13 Feb 2008
AB   Background & Aims: Impaired mucosal. defense plays an important role in
      the pathogenesis of Crohn's disease (CD), one of the main subtypes of
      inflammatory bowel disease (IBD). Deleted in malignant brain tumors 1(
        DMBT1) is a secreted scavenger receptor cysteine-rich protein
with
      predominant expression in. the intestine and has been proposed to exert
      possible functions in regenerative processes and pathogen defense. Here,
      we aimed at analyzing the role of ***DMBT1*** in IBD. Methods: We
      studied ***DMBT1*** expression in IBD and normal tissues by
      quantitative reverse transcription-polymerase chain reaction,
      immunohistochemistry, and mRNA in situ hybridization. Genetic
      polymorphisms within ***DMBT1*** were analyzed in an Italian IBD
      case-control sample. ***Dmbt1*** (-/-) mice were generated,
      characterized, and analyzed for their susceptibility to dextran sulfate
      sodium-induced colitis. Results: ***DMBT1*** levels correlate with
      disease activity in inflamed IBD tissues. A highly significant fraction
      of the patients with IBD displayed up-regulation of ***DMBT1***
      specifically in the intestinal epithelial surface cells and Paneth cells.
      A deletion allele of ***DMBT1*** with a reduced: number of scavenger
      receptor cysteine-rich domain coding exons is associated with an increased
      risk of CD (P =.00056; odds ratio, 1.75) but not for ulcerative colitis.
        Dmbt1 (-/-) mice display enhanced susceptibility to dextran
sulfate
      sodium-induced colitis and elevated Tnf, Il6, and Nod2 expression levels

during inflammation. Conclusions: ***DMBT1*** may play a role in
intestinal mucosal protection and prevention of inflammation. Impaired
DMBT1 function may contribute to the pathogenesis of CD.

L14   ANSWER 2 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN
AN   2005:953991 CAPLUS <<LOGINID::20090423>>
DN   143:260332
TI   Use of ***DMBT1*** protein for capturing sulfate and phosphate groups
      exposed in disease-associated agents
IN   Mollenhauer, Jan; End, Caroline; Blaich, Stephanie; Bergmann, Gaby;
      Renner, Marcus; Lyer, Stefan; ***Wittig, Rainer*** ; Poustka,
      Annemarie; Bikker, Floris; Ligtenberg, Anton; Nieuw-Amerongen, Arie;
      Veerman, Enno
PA   Deutsches Krebsforschungszentrum Stiftung des Oeffentlichen Rechts,
      Germany
SO   Eur. Pat. Appl., 57 pp.
      CODEN: EPXXDW
DT   Patent
LA   English
FAN.CNT 1
      PATENT NO.   KIND   DATE   APPLICATION NO.   DATE
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PI   EP 1568374   A1   20050831   EP 2004-4281   20040225
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
      WO 2005079834   A1   20050901   WO 2005-EP1994   20050225
      WO 2005079834   A9   20051027
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
             RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
             MR, NE, SN, TD, TG
      EP 1727558   A1   20061206   EP 2005-732131   20050225
         R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
      US 20080234185   A1   20080925   US 2006-590657   20060825
PRAI EP 2004-4281   A   20040225
      WO 2005-EP1994   W   20050225
AB   Disclosed is the use of ***DMBT1*** , or of the nucleic acid encoding
      it, for the manuf. of a medicament for the treatment of a patient
      suffering from a disease caused by an agent which possesses at least one
      accessible sulfate and/or at least one accessible phosphate group.
      DMBT1 may also be used as a diagnostic for diagnosing the
      susceptibility of an individual to sulfate or phosphate groups, as well in
      methods for diagnosis, prophylaxis or treatment of diseases caused by an
      agent which possesses at least one accessible sulfate and/or at least one
      accessible phosphate group. The invention is based on the discovery that
      human protein ***DMBT1*** (Deleted in Malignant Brain Tumors 1) is a
      dual-specific pattern recognition receptor for non-self (bacterial cell
      wall components, gp120 of HIV, damage-, inflammation-, and cancer-causing
      sulfated carbohydrates) and self structures (DNA, phospholipids, cell

surface and extracellular matrix carbohydrates), which interacts with
accessible sulfate and or phosphate groups, which are present on numerous
compds., compns., and organisms. Pattern recognition of   ***DMBT1***
is mediated via an 11-amino acid motif (GRVEVLYRGSW) that binds sulfate
and phosphate groups. By acting as a dual-specific PRR,   ***DMBT1***
may exert a general insulator function against a broad range of pathogens,
which predicts a contribution of   ***DMBT1***   germline deletions to
human susceptibility to infection, inflammation, and cancer. Furthermore,
a 40% decreased level of   ***DMBT1***   in male mice correlates with an
increased susceptibility and with a deficient protection against dextran
sulfate sodium-induced tissue damage and inflammation in the colon.

RE.CNT 7   THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
                 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 3 OF 4 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
     DUPLICATE 2
AN   2005:69186 BIOSIS <<LOGINID::20090423>>
DN   PREV200500070157
TI   Bacteria binding by ***DMBT1*** /SAG/gp-340 is confined to the
     VEVLXXXXW motif in its scavenger receptor cysteine-rich domains.
AU   Bikker, Floris J.; Ligtenberg, Antoon J. M. [Reprint Author]; End,
     Caroline; Renner, Marcus; Blaich, Stephanie; Lyer, Stefan; ***Wittig,***
   ***   Rainer*** ; van't Hof, Wim; Veerman, Enno C. I.; Nazmi, Kamran; De
     Blieck-Hogervorst, Jolanda M. A.; Kioschis, Petra; Amerongen, Arie V.
     Nieuw; Poustka, Annemarie; Mollenhauer, Jan
CS   Acad Ctr Dent AmsterdamDept Oral Biochem, Free Univ Amsterdam,
     Boechorststr 7, NL-1081 BT, Amsterdam, Netherlands
     ajm.ligtenberg@vumc.nl
SO   Journal of Biological Chemistry, (November 12 2004) Vol. 279, No. 46, pp.
     47699-47703. print.
     CODEN: JBCHA3. ISSN: 0021-9258.
DT   Article
LA   English
ED   Entered STN: 16 Feb 2005
     Last Updated on STN: 16 Feb 2005
AB   The scavenger receptor cysteine-rich (SRCR) proteins form an archaic group
     of metazoan proteins characterized by the presence of SRCR domains. These
     proteins are classified in group A and B based on the number of conserved
     cysteine residues in their SRCR domains, i.e. six for group A and eight
     for group B. The protein ***DMBT1***   (deleted in malignant brain
     tumors 1), which is identical to salivary agglutinin and lung gp-340,
     belongs to the group B SRCR proteins and is considered to be involved in
     tumor suppression and host defense by pathogen binding. In a previous
     study we used non-overlapping synthetic peptides covering the SRCR
     consensus sequence to identify a 16-amino acid bacteria-binding protein
     loop (peptide SRCRP2; QGRVEVLYRGSWGTVC) within the SRCR domains. In this
     study, using overlapping peptides, we pinpointed the minimal
     bacteria-binding site on SRCRP2, and thus ***DMBT1*** , to an 11-amino
     acid motif (***DMBT1***   pathogen-binding site 1 or   ***DMBT1pbs1***
     ; GRVEVLYRGSW). An alanine substitution scan revealed that VEVL and Trp
     are critical residues in this motif. Bacteria binding by
       DMBT1pbs1   was different from the bacteria binding by the
     macrophage receptor MARCO in which an RXR motif was critical. In
     addition, the homologous consensus sequences of a number of SRCR proteins
     were synthesized and tested for bacteria binding. Only consensus
     sequences of   ***DMBT1***   orthologues bound bacteria by this motif.

AN   2004:130519 BIOSIS <<LOGINID::20090423>>
DN   PREV200400116079
TI   Carcinogen inducibility in vivo and down-regulation of   ***DMBT1***
      during breast carcinogenesis.
AU   Mollenhauer, Jan [Reprint Author]; Helmke, Burkhard; Medina, Daniel;
      Bergmann, Gaby; Gassler, Nikolaus; Mueller, Hanna; Lyer, Stefan;
      Diedrichs, Laura; Renner, Marcus;   ***Wittig, Rainer*** ; Blaich,
      Stephanie; Hamann, Ute; Madsen, Jens; Holmskov, Uffe; Bikker, Floris;
      Ligtenberg, Antoon; Carlen, Anette; Olsson, Jan; Otto, Herwart F.;
      O'Malley, Bert; Poustka, Annemarie
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
      Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
      j.mollenhauer@dkfz-heidelberg.de; j.mollenhauer@dkfz-heidelberg.de
DT   Article
LA   English
ED   Entered STN: 3 Mar 2004
      Last Updated on STN: 3 Mar 2004
AB   Deleted in malignant brain tumors 1 (***DMBT1***) has been proposed as
      a candidate tumor suppressor for brain and epithelial cancer. Initial
      studies suggested loss of expression rather than mutation as the
      predominant mode of   ***DMBT1***   inactivation. However, in situ
      studies in lung cancer demonstrated highly sophisticated changes of
       DMBT1   expression and localization, pointing to a chronological
      order of events. Here we report on the investigation of   ***DMBT1***
      in breast cancer in order to test whether these principles might also be
      attributable to other tumor types. Comprehensive mutational analyses did
      not uncover unambiguous inactivating   ***DMBT1***   mutations in breast
      cancer. Expression analyses in the human and mouse mammary glands pointed
      to the necessity of   ***DMBT1***   induction. While age-dependent and
      hormonal effects could be ruled out, 9 of 10 mice showed induction of
       Dmbt1   expression after administration of the carcinogen
      7,12-dimethybenz(alpha)anthracene prior to the onset of tumorigenesis or
      other histopathological changes.   ***DMBT1***   displayed significant
      up-regulation in human tumor-flanking tissues compared to in normal breast
      tissues (P < 0.05). However, the breast tumor cells displayed a switch
      from lumenal secretion to secretion to the extracellular matrix and a
      significant down-regulation compared to that in matched normal flanking
      tissues (P < 0.01). We concluded that loss of expression also is the
      predominant mode of   ***DMBT1***   inactivation in breast cancer. The
      dynamic behavior of   ***DMBT1***   in lung carcinoma is fully reflected
      in breast cancer, which suggests that this behavior might be common to
      tumor types arising from monolayered epithelia.

=> e poustka annemarie/au
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E2   4   POUSTKA ANNE MARIE/AU
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E4   2   POUSTKA ANNEMARIE DR/AU
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E10             1       POUSTKA F PROF/AU
E11             4       POUSTKA FIRTZ/AU
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=> s e2-e5 and dmbt?
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              ANNEMARIE DR"/AU OR "POUSTKA ANNEMARIE POUSTKA AND FRITZ"/AU)
              AND DMBT?

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PROCESSING COMPLETED FOR L15
L16            35 DUP REM L15 (68 DUPLICATES REMOVED)

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 35 ANSWERS - CONTINUE? Y/(N):y

L16   ANSWER 1 OF 35  CAPLUS  COPYRIGHT 2009 ACS on STN DUPLICATE 1
AN    2009:402136  CAPLUS <<LOGINID::20090423>>
DN    150:327861
TI    ***DMBT1***   functions as pattern-recognition molecule for
      poly-sulfated and poly-phosphorylated ligands
AU    End, Caroline; Bikker, Floris; Renner, Marcus; Bergmann, Gaby; Lyer,
      Stefan; Blaich, Stephanie; Hudler, Melanie; Helmke, Burkhard; Gassler,
      Nikolaus; Autschbach, Frank; Ligtenberg, Antoon J. M.; Benner, Axel;
      Holmskov, Uffe; Schirmacher, Peter; Nieuw Amerongen, Arie V.; Rosenstiel,
      Philip; Sina, Christian; Franke, Andre; Hafner, Mathias; Kioschis, Petra;
      Schreiber, Stefan;  ***Poustka, Annemarie***  ; Mollenhauer, Jan
CS    Division of Molecular Genome Analysis, German Cancer Research Center,
      Heidelberg, Germany
SO    European Journal of Immunology (2009), 39(3), 833-842
      CODEN: EJIMAF; ISSN: 0014-2980
PB    Wiley-VCH Verlag GmbH & Co. KGaA
DT    Journal
LA    English
AB    Deleted in malignant brain tumors 1 (  ***DMBT1***  ) is a secreted
      glycoprotein displaying a broad bacterial-binding spectrum.  Recent
      functional and genetic studies linked  ***DMBT1***   to the suppression
      of LPS-induced TLR4-mediated NF-.kappa.B activation and to the
      pathogenesis of Crohn's disease.  Here, the authors aimed at unraveling
      the mol. basis of its function in mucosal protection and of its broad
      pathogen-binding specificity.  The authors report that  ***DMBT1***
      directly interacts with dextran sulfate sodium (DSS) and carrageenan, a
      structurally similar sulfated polysaccharide, which is used as a
      texturizer and thickener in human dietary products.  However, binding of
        ***DMBT1***   does not reduce the cytotoxic effects of these agents to
      intestinal/epithelial cells in vitro.  DSS and carrageenan compete for
        ***DMBT1***   -mediated bacterial aggregation via interaction with its
      bacterial-recognition motif.  Competition and ELISA studies identify
      poly-sulfated and poly-phosphorylated structures as ligands for this
      recognition motif, such as heparan sulfate, LPS, and lipoteichoic acid.
      Dose-response studies in  ***Dmbt1***  -/- and  ***Dmbt1***  +/+ mice
      utilizing the DSS-induced colitis model demonstrate a differential
      response only to low but not to high DSS doses.  The authors propose that
        ***DMBT1***   functions as pattern-recognition mol. for poly-sulfated and
      poly-phosphorylated ligands providing a mol. basis for its broad
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bacterial-binding specificity and its inhibitory effects on LPS-induced
TLR4-mediated NF-.kappa.B activation.

AN   2009:132171   BIOSIS <<LOGINID::20090423>>
DN   PREV200900132171
TI   ***DMBT1***   expression distinguishes anorectal from cutaneous
      melanoma.
AU   Helmke, Burkhard Maria [Reprint Author]; Renner, Marcus;   ***Poustka,***
   ***   Annemarie*** ; Schirmacher, Peter; Mollenhauer, Jan; Kern, Michael
Andre
CS   Univ Heidelberg, Inst Pathol, Neuenheimer Feld 220-221, D-69120
      Heidelberg, Germany
      burkhard.helmke@elbekliniken.de
SO   Histopathology (Oxford), (JAN 2009) Vol. 54, No. 2, pp. 233-240.
      ISSN: 0309-0167.
DT   Article
LA   English
ED   Entered STN: 18 Feb 2009
      Last Updated on STN: 25 Feb 2009
AB   Anorectal melanoma (AM) forms a rare but highly malignant subset of
      mucosal melanoma with an extremely poor prognosis. Although AMs display
      histological and immunohistochemical features very similar to cutaneous
      melanoma (CM), no association exists either with exposure to ultraviolet
      light or with melanocytic naevi. While AMs are clearly distinguished from
      CM by displaying few BRAF mutations, they are commonly indistinguishable
      from CM at the level of gene expression. The aim was to carry out
      expression analyses of classical immunohistochemical markers and of the
      protein deleted in malignant brain tumours 1 (***DMBT1***) in cases of
      primary anorectal malignant melanoma and CM.Expression analyses of
      classical immunohistochemical markers (S100, HMB45, Melan A and MiTF) and
      of the protein   ***DMBT1***   were carried out in 27 cases of primary
      anorectal malignant melanoma and 26 cases of CM. All AM cases analysed
      showed expression of at least three of the classical markers for melanoma.
      However, immunohistochemistry showed 19 out of 27 AM to be positive for
       DMBT1 , which represented a statistically significant difference
(P
      = 0.0009) compared with CM (six out of 26), which more commonly are
      negative for   ***DMBT1***   expression.These results identify
       DMBT1   as a molecular feature that may allow distinction between
AM
      and CM and support the notion that AM represents an entity molecularly
      distinct from CM.

AN   2007:440147   BIOSIS <<LOGINID::20090423>>
DN   PREV200700436905
TI   Regulation of   ***DMBT1***   via NOD2 and TLR4 in intestinal epithelial
      cells modulates bacterial recognition and invasion.
AU   Rosenstiel, Philip; Sina, Christian; End, Caroline; Renner, Marcus; Lyer,
      Stefan; Till, Andreas; Hellmig, Stephan; Nikolaus, Susanna; Foelsch,
      Ulrich R.; Helmke, Burkhard; Autschbach, Frank; Schirmacher, Peter;
      Kioschis, Petra; Hafner, Mathias;   ***Poustka, Annemarie*** ;
      Mollenhauer, Jan; Schreiber, Stefan [Reprint Author]
CS   Univ Hosp Schleswig Holstein, Inst Clin Mol Biol, Campus

Kiel,Schittenhelmstrache 12, Kiel, Germany
s.schreiber@mucosa.de
SO   Journal of Immunology, (JUN 15 2007) Vol. 178, No. 12, pp. 8203-8211.
      CODEN: JOIMA3. ISSN: 0022-1767.
DT   Article
LA   English
ED   Entered STN: 15 Aug 2007
      Last Updated on STN: 15 Aug 2007
AB   Mucosal epithelial cell layers are constantly exposed to a complex
      resident microflora. Deleted in malignant brain tumors 1 (***DMBT1***
) belongs to the group of secreted scavenger receptor cysteine-rich
      proteins and is considered to be involved in host defense by pathogen
      binding. This report describes the regulation and function of
       DMBT1   in intestinal epithelial cells, which form the primary
      immunological barrier for invading pathogens. We report that intestinal
      epithelial cells up-regulate   ***DMBT1***   upon proinflammatory stimuli
      (e.g., TNF-alpha, LPS). We demonstrate that   ***DMBT1***   is a target
      gene for the intracellular pathogen receptor NOD2 via NF-kappa B
      activation.   ***DMBT1***   is strongly up-regulated in the inflamed
      intestinal mucosa of Crohn's disease patients with wild-type, but not with
      mutant NOD2. We show that   ***DMBT1***   inhibits cytoinvasion of
      Salmonella enterica and LPS- and muramyl dipeptide-induced NF-kappa B
      activation and cytokine secretion in vitro. Thus,   ***DMBT1***   may
      play an important role in the first line of mucosal defense conferring
      immune exclusion of bacterial cell wall components. Dysregulated
      intestinal   ***DMBT1***   expression due to mutations in the NOD2/CARD15
      gene may be part of the complex pathophysiology of barrier dysfunction in
      Crohn's disease.

L16   ANSWER 4 OF 35 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 4
AN   2007:421389 BIOSIS <<LOGINID::20090423>>
DN   PREV200700416637
TI   Genetic mapping in mice identifies   ***DMBT1***   as a candidate modifier
      of mammary tumors and breast cancer risk.
AU   Blackburn, Anneke C.; Hill, Linda Z.; Roberts, Amy L.; Wang, Jun; Aud,
      Dee; Jung, Jimmy; Nikolcheva, Tania; Allard, John; Peltz, Gary; Otis,
      Christopher N.; Cao, Qing J.; Ricketts, Reva St. J.; Naber, Stephen P.;
      Mollenhauer, Jan;   ***Poustka, Annemarie*** ; Malamud, Daniel; Jerry, D.
      Joseph [Reprint Author]
CS   Univ Massachusetts, Dept Vet and Anim Sci, Paige Lab, 161 Holdsworth Way,
      Amherst, MA 01003 USA
      jjerry@vasci.umass.edu
SO   American Journal of Pathology, (JUN 2007) Vol. 170, No. 6, pp. 2030-2041.
      CODEN: AJPAA4. ISSN: 0002-9440.
DT   Article
LA   English
ED   Entered STN: 8 Aug 2007
      Last Updated on STN: 8 Aug 2007
AB   Low-penetrance breast cancer susceptibility alleles seem to play a
      significant role in breast cancer risk but are difficult to identify in
      human cohorts. A genetic screen of 176 N2 backcross progeny of two
      TrP53(+/-) strains, BALB/c and C57BL/6, which differ in their
      susceptibility to mammary tumors, identified a modifier of mammary tumor
      susceptibility in an similar to 25-Mb interval on mouse chromosome 7
      (designated SuprMam1). Relative to heterozygotes, homozygosity for BALB/c
      alleles of SuprMam1 significantly decreased mammary tumor latency from

70.7 to 61.1 weeks and increased risk twofold (P = 0.002).   ***Dmbtl***
(deleted in malignant brain tumors 1) was identified as a candidate
modifier gene within the SuprMam1 interval because it was differentially
expressed in mammary tissues from BALB/c-Trp53(+/-) and C57BL/6-TrP53(+/-)
mice.   ***Dmbt1***   mRNA and protein was reduced in mammary glands of
the susceptible BALB/c mice. Immunohistochemical staining demonstrated
that   ***DMBT1***   protein expression was also significantly reduced in
normal breast tissue from women with breast cancer (staining score, 1.8; n
= 46) compared with cancer-free controls (staining score, 3.9; n = 53; P <
0.0001). These experiments demonstrate the use of Trp53(+/-) mice as a
sensitized background to screen for low-penetrance modifiers of cancer.
The results identify a novel mammary tumor susceptibility locus in mice
and support a role for   ***DMBT1***   in suppression of inammary tumors
in both miceandwomen.

AN   2008:112593 BIOSIS <<LOGINID::20090423>>
DN   PREV200800114726
TI   ***DMBT1***   confers mucosal protection in vivo and a deletion variant
      is associated with Crohn's disease.
AU   Renner, Marcus; Bergmann, Gaby; Krebs, Inge; End, Caroline; Lyer, Stefan;
      Hilberg, Frank; Helmke, Burkhard; Gassler, Nikolaus; Autschbach, Frank;
      Bikker, Floris; Strobel-Freidekind, Olga; Gronert-Sum, Sabine; Benner,
      Axel; Blaich, Stephanie; Wittig, Rainer; Hudler, Melanie; Ligtenberg,
      Antoon J.; Madsen, Jens; Holmskov, Uffe; Annese, Vito; Latiano, Anna;
      Schirmacher, Peter; Amerongen, Arie V. Nieuw; D'Amato, Mauro; Kioschis,
      Petra; Hafner, Mathias;   ***Poustka, Annemarie***   ; Mollenhauer, Jan
      [Reprint Author]
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, Neuenheimer Feld 280,
      D-69120 Heidelberg, Germany
      j.mollenhauer@dkfz.de
SO   Gastroenterology, (NOV 2007) Vol. 133, No. 5, pp. 1499-1509.
      CODEN: GASTAB. ISSN: 0016-5085.
DT   Article
LA   English
ED   Entered STN: 13 Feb 2008
      Last Updated on STN: 13 Feb 2008
AB   Background & Aims: Impaired mucosal. defense plays an important role in
      the pathogenesis of Crohn's disease (CD), one of the main subtypes of
      inflammatory bowel disease (IBD). Deleted in malignant brain tumors 1(
        DMBT1   ) is a secreted scavenger receptor cysteine-rich protein
with
      predominant expression in. the intestine and has been proposed to exert
      possible functions in regenerative processes and pathogen defense. Here,
      we aimed at analyzing the role of   ***DMBT1***   in IBD. Methods: We
      studied   ***DMBT1***   expression in IBD and normal tissues by
      quantitative reverse transcription-polymerase chain reaction,
      immunohistochemistry, and mRNA in situ hybridization. Genetic
      polymorphisms within   ***DMBT1***   were analyzed in an Italian IBD
      case-control sample.   ***Dmbt1***   (-/-) mice were generated,
      characterized, and analyzed for their susceptibility to dextran sulfate
      sodium-induced colitis. Results: ***DMBT1***   levels correlate with
      disease activity in inflamed IBD tissues. A highly significant fraction
      of the patients with IBD displayed up-regulation of   ***DMBT1***
      specifically in the intestinal epithelial surface cells and Paneth cells.
      A deletion allele of   ***DMBT1***   with a reduced: number of scavenger

receptor cysteine-rich domain coding exons is associated with an increased
        risk of CD (P =.00056; odds ratio, 1.75) but not for ulcerative colitis.
           Dmbt1 (-/-) mice display enhanced susceptibility to dextran
sulfate
        sodium-induced colitis and elevated Tnf, Il6, and Nod2 expression levels
        during inflammation. Conclusions: ***DMBT1*** may play a role in
        intestinal mucosal protection and prevention of inflammation. Impaired
           DMBT1 function may contribute to the pathogenesis of CD.

L16   ANSWER 6 OF 35 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
        DUPLICATE 6
AN   2007:411406 BIOSIS <<LOGINID::20090423>>
DN   PREV200700411064
TI   ***DMBT1*** is frequently downregulated in well-differentiated gastric
        carcinoma but more frequently upregulated across various gastric cancer
        types.
AU   Conde, Ana R. [Reprint Author]; Martins, Ana P.; Brito, Miguel; Manuel,
        Armandina; Ramos, Sancia; Malta-Vacas, Joana; Renner, Marcus;
           Poustka, Annemarie ; Mollenhauer, Jan; Monteiro, Carolino
CS   Univ Lisbon, Fac Farm, Av Prof Gama Pinto, P-1649003 Lisbon, Portugal
        arconde@ff.ul.pt
SO   International Journal of Oncology, (JUN 2007) Vol. 30, No. 6, pp.
        1441-1446.
        ISSN: 1019-6439.
DT   Article
LA   English
ED   Entered STN: 1 Aug 2007
        Last Updated on STN: 1 Aug 2007
AB   Well-differentiated gastric carcinomas are considered to represent a
        distinct entity emerging via specific molecular changes different from
        those found in other gastric carcinoma types. The gene deleted in
        malignant brain tumours 1 (***DMBT1***) at 10q25.3-q26.1 codes for a
        protein presumably involved in cell differentiation and protection and has
        been proposed as a candidate tumour suppressor for brain and epithelial
        cancer. One study reported a loss of ***DMBT1*** expression in 12.5%
        (5/40) of gastric cancer samples. Here, we examined in more detail
           DMBT1 protein and mRNA expression in 78 primary gastric tumour
        samples and corresponding normal gastric mucosa. ***DMBT1*** was
        expressed in all non-tumour gastric mucosa tissues. Eleven out of 71
        (15%) gastric tumours were negative for the ***DMBT1*** protein in
        immunohistochemical analyses. Lack of ***DMBT1*** expression was
        significantly more frequently found in well-differentiated gastric tumours
        (6/18 well-differentiated tumours vs. 5/53 other subtypes; P=0.025).
        Quantitative RT-PCR revealed a downregulation of the ***DMBT1*** niRNA
        for 8/21 (38%) cases, while the remaining 13 cases (62%) displayed a
        substantial upregulation. Our data suggest that a loss of ***DMBT1***
        expression may preferentially take place in well-differentiated gastric
        carcinoma. However, an upregulation of ***DMBT1*** expression is more
        frequently found across all gastric cancer types.

L16   ANSWER 7 OF 35 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
        DUPLICATE 7
AN   2007:601740 BIOSIS <<LOGINID::20090423>>
DN   PREV200700605050
TI   ***Dmbt1*** is a target gene of NOD2/CARD15 and protects intestinal
        epithelial cells from bacterial invasion.
AU   Rosenstiel, Philip; Sina, Christian; Hellmig, Stephan; Nikolaus, Susanna;

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     End, Caroline; Renner, Markus; Lyer, Stephan; Helmke, Burkhard; Hafner,
     Mathias;   ***Poustka, Annemarie***  ; Mollenhauer, Jan; Schreiber, Stefan
SO   Gastroenterology, (APR 2007) Vol. 132, No. 4, Suppl. 2, pp. A550.
     Meeting Info.: Digestive Disease Week Meeting/108th Annual Meeting of the
     American-Gastroenterological-Association. Washington, DC, USA. May 19 -24,
     2007. Amer Gastroenterol Assoc; Amer Assoc Study Liver Dis; Amer Soc
     Gastrointestinal Endoscopy; Soc Surg Alimentary Tract.
     CODEN: GASTAB. ISSN: 0016-5085.
DT   Conference; (Meeting)
     Conference; Abstract; (Meeting Abstract)
LA   English
ED   Entered STN: 6 Dec 2007
     Last Updated on STN: 6 Dec 2007
AB   Background&Aims: Mucosal epithelial cell layers are constantly exposed to
     a complex resident microflora.   ***DMBT1***   (deleted in malignant
     brain tumors 1) belongs to the group of secreted scavenger receptor
     cysteine-rich (SRCR) proteins and is considered to be involved in host
     defense by pathogen binding.  This report describes the regulation and
     function of   ***DMBT1***   in intestinal epithelial cells, which form the
     primary immunological barrier for invading pathogens.Methods:Expression of
      ***DMBT1***   was determined by Taqman real time PCR, Western blot and
     immunohistochemistry.  Promotorstudies were performed using luciferase
     reporter gene experiments.  Bacterial invasion was tested by gentamicin
     protection assay and siRNA approaches.  Results: We demonstrate that
      ***DMBT1***   is a target gene for the intracellular pathogen receptor
     NOD2 via NF-KB activation,   ***DMBT1***   is strongly upregulated in the
     inflamed intestinal mucosa of Crohn disease patients with wild-type, but
     not with mutant NOD2.  We show that   ***DMBT1***   inhibits cytoinvasion
     of Salmonella enterica and LPS-induced Toll-like receptor 4 signalling.
     Silencing of   ***DMBT1***   in intestinal epithelial cells leads to an
     increased invasion of bacteria.  Conclusions:   ***DMBT1***   may play an
     important role in the first line of mucosal defense conferring immune
     exclusion of bacterial cell wall components.  Dysregulated intestinal
      ***DMBT1***   expression due to mutations in the NOD2/CARD15 gene may be
     part of the complex pathophysiology of barrier dysfunction in Crohn
     disease.

L16  ANSWER 8 OF 35     MEDLINE on STN                    DUPLICATE 8
AN   2007767353     MEDLINE <<LOGINID::20090423>>
DN   PubMed ID: 17908325
TI   Deleted in Malignant Brain Tumors 1 (  ***DMBT1***  ) is present in
     hyaline membranes and modulates surface tension of surfactant.
AU   Muller Hanna; End Caroline; Renner Marcus; Helmke Burkhard M; Gassler
     Nikolaus; Weiss Christel; Hartl Dominik; Griese Matthias; Hafner Mathias;
      ***Poustka Annemarie***  ; Mollenhauer Jan; Poeschl Johannes
CS   Division of Neonatology, Department of Pediatrics, University of
     Heidelberg, Im Neuenheimer Feld 153, 69120 Heidelberg, Germany..
     Hanna.Mueller@med.uni-heidelberg.de
SO   Respiratory research, (2007) Vol. 8, pp. 69.  Electronic Publication:
     2007-10-01.
     Journal code: 101090633. E-ISSN: 1465-993X.
     Report No.: NLM-PMC2164949.
CY   England: United Kingdom
DT   Journal; Article; (JOURNAL ARTICLE)
LA   English
FS   Priority Journals
EM   200801
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AB   BACKGROUND: Deleted in Malignant Brain Tumors 1 (***DMBT1***) is a
      secreted scavenger receptor cysteine-rich protein that binds various
      bacteria and is thought to participate in innate pulmonary host defense.
      We hypothesized that pulmonary ***DMBT1*** could contribute to
      respiratory distress syndrome in neonates by modulating surfactant
      function. METHODS: ***DMBT1*** expression was studied by
      immunohistochemistry and mRNA in situ hybridization in post-mortem lungs
      of preterm and full-term neonates with pulmonary hyaline membranes. The
      effect of human recombinant ***DMBT1*** on the function of bovine and
      porcine surfactant was measured by a capillary surfactometer.
         DMBT1 -levels in tracheal aspirates of ventilated preterm and term
      infants were determined by ELISA. RESULTS: Pulmonary ***DMBT1*** was
      localized in hyaline membranes during respiratory distress syndrome. In
      vitro addition of human recombinant ***DMBT1*** to the surfactants
      increased surface tension in a dose-dependent manner. The ***DMBT1***
      -mediated effect was reverted by the addition of calcium depending on the
      surfactant preparation. CONCLUSION: Our data showed pulmonary
         DMBT1 expression in hyaline membranes during respiratory distress
      syndrome and demonstrated that ***DMBT1*** increases lung surface
      tension in vitro. This raises the possibility that ***DMBT1*** could
      antagonize surfactant supplementation in respiratory distress syndrome and
      could represent a candidate target molecule for therapeutic intervention
      in neonatal lung disease.

L16   ANSWER 9 OF 35 CAPLUS COPYRIGHT 2009 ACS on STN
AN   2007:1398177 CAPLUS <<LOGINID::20090423>>
DN   148:446649
TI   Deleted in Malignant Brain Tumors 1 (***DMBT1***) is present in
      hyaline membranes and modulates surface tension of surfactant
AU   Mueller, Hanna; End, Caroline; Renner, Marcus; Helmke, Burkhard M.;
      Gassler, Nikolaus; Weiss, Christel; Hartl, Dominik; Griese, Matthias;
      Hafner, Mathias; ***Poustka, Annemarie*** ; Mollenhauer, Jan; Poeschl,
      Johannes
CS   Division of Neonatology, Department of Pediatrics, University of
      Heidelberg, Heidelberg, 69120, Germany
SO   Respiratory Research (2007), 8(1), No pp. given
      CODEN: RREEBZ; ISSN: 1465-993X
      URL: http://respiratory-research.com/content/pdf/1465-9921-8-69.pdf
PB   BioMed Central Ltd.
DT   Journal; (online computer file)
LA   English
AB   Background: Deleted in Malignant Brain Tumors 1 (***DMBT1***) is a
      secreted scavenger receptor cysteine-rich protein that binds various
      bacteria and is thought to participate in innate pulmonary host defense.
      The authors hypothesized that pulmonary ***DMBT1*** could contribute
      to respiratory distress syndrome in neonates by modulating surfactant
      function. Methods: ***DMBT1*** expression was studied by
      immunohistochem. and mRNA in situ hybridization in post-mortem lungs of
      preterm and full-term neonates with pulmonary hyaline membranes. The
      effect of human recombinant ***DMBT1*** on the function of bovine and
      porcine surfactant was measured by a capillary surfactometer.
         DMBT1 -levels in tracheal aspirates of ventilated preterm and term
      infants were detd. by ELISA. Results: Pulmonary ***DMBT1*** was
      localized in hyaline membranes during respiratory distress syndrome. In

vitro addn. of human recombinant   ***DMBT1***   to the surfactants
increased surface tension in a dose-dependent manner. The   ***DMBT1***
-mediated effect was reverted by the addn. of calcium depending on the
surfactant prepn. Conclusions: The data showed pulmonary   ***DMBT1***
expression in hyaline membranes during respiratory distress syndrome and
demonstrated that   ***DMBT1***   increases lung surface tension in vitro.
This raises the possibility that   ***DMBT1***   could antagonize
surfactant supplementation in respiratory distress syndrome and could
represent a candidate target mol. for therapeutic intervention in neonatal
lung disease.

RE.CNT 41   THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16   ANSWER 10 OF 35 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 9
AN   2006:604365 BIOSIS <<LOGINID::20090423>>
DN   PREV200600609765
TI   Molecular characterization of the porcine deleted in malignant brain
      tumors 1 gene (***DMBT1***   ).
AU   Haase, Bianca; Humphray, Sean J.; Lyer, Stefan; Renner, Marcus;
        Poustka, Annemarie   ; Mollenhauer, Jan; Leeb, Tosso [Reprint
Author]
CS   Univ Bern, Vetsuisse Fac, Inst Genet, Bremgartenstr 109A, CH-3001 Bern,
      Switzerland
      Tosso.Leeb@itz.unibe.ch
SO   Gene (Amsterdam), (JUL 19 2006) Vol. 376, No. 2, pp. 184-191.
      CODEN: GENED6. ISSN: 0378-1119.
DT   Article
LA   English
ED   Entered STN: 15 Nov 2006
      Last Updated on STN: 15 Nov 2006
AB   The human gene deleted in malignant brain tumors 1 (***DMBT1***   ) is
      considered to play a role in tumorigenesis and pathogen defense. It
      encodes a protein with multiple scavenger receptor cysteine-rich (SRCR)
      domains, which are involved in recognition and binding of a broad spectrum
      of bacterial pathogens. The SRCR domains are encoded by highly homologous
      repetitive exons, whose number in humans may vary from 8 to 13 due to
      genetic polymorphism. Here, we characterized the porcine   ***DMBTI***
      gene on the mRNA and genomic level. We assembled a 4.5 kb porcine
        DMBT1   cDNA sequence from RT-PCR amplified seminal vesicle RNA.
      The porcine   ***DMBT1***   cDNA contains an open reading frame of 4050
      nt. The transcript gives rise to a putative polypeptide of 1349 amino
      acids with a calculated mass of 147.9 kDa. Compared to human
        DMBT1   , it contains only four N-terminal SRCR domains. Northern
      blotting revealed transcripts of similar to 4.7 kb in size in the tissues
      analyzed. Analysis of ESTs suggested the existence of secreted and
      transmembrane variants. The porcine   ***DMBT1***   gene spans about 54
      kb on chromosome 14q28-q29. In contrast to the characterized cDNA, the
      genomic BAC clone only contained 3 exons coding for N-terminal SRCR
      domains. In different mammalian   ***DMBT1***   orthologs large
      interspecific differences in the number of SRCR exons and utilization of
      the transmembrane exon exist. Our data suggest that the porcine
        DMBT1   gene may share with the human   ***DMBT1***   gene
      additional intraspecific variations in the number of SRCR-coding exons.
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L16   ANSWER 11 OF 35 CAPLUS COPYRIGHT 2009 ACS on STN

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AN      2005:953991  CAPLUS <<LOGINID::20090423>>
DN      143:260332
TI      Use of   ***DMBT1***   protein for capturing sulfate and phosphate groups
        exposed in disease-associated agents
IN      Mollenhauer, Jan; End, Caroline; Blaich, Stephanie; Bergmann, Gaby;
        Renner, Marcus; Lyer, Stefan; Wittig, Rainer;   ***Poustka, Annemarie***
        ; Bikker, Floris; Ligtenberg, Anton; Nieuw-Amerongen, Arie; Veerman, Enno
PA      Deutsches Krebsforschungszentrum Stiftung des Oeffentlichen Rechts,
        Germany
SO      Eur. Pat. Appl., 57 pp.
        CODEN: EPXXDW
DT      Patent
LA      English
FAN.CNT 1
        PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
        ---------------      ----   --------    --------------------     --------
PI      EP 1568374           A1     20050831    EP 2004-4281              20040225
           R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
               IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
        WO 2005079834        A1     20050901    WO 2005-EP1994           20050225
        WO 2005079834        A9     20051027
           W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
               CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
               GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
               LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
               NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
               TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
          RW:  BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
               AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
               EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
               RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
               MR, NE, SN, TD, TG
        EP 1727558           A1     20061206    EP 2005-732131           20050225
           R:  AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
               IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
        US 20080234185       A1     20080925    US 2006-590657           20060825
PRAI    EP 2004-4281         A      20040225
        WO 2005-EP1994       W      20050225
```

AB   Disclosed is the use of   ***DMBT1***   , or of the nucleic acid encoding
        it, for the manuf. of a medicament for the treatment of a patient
        suffering from a disease caused by an agent which possesses at least one
        accessible sulfate and/or at least one accessible phosphate group.
          DMBT1   may also be used as a diagnostic for diagnosing the
        susceptibility of an individual to sulfate or phosphate groups, as well in
        methods for diagnosis, prophylaxis or treatment of diseases caused by an
        agent which possesses at least one accessible sulfate and/or at least one
        accessible phosphate group. The invention is based on the discovery that
        human protein   ***DMBT1***   (Deleted in Malignant Brain Tumors 1) is a
        dual-specific pattern recognition receptor for non-self (bacterial cell
        wall components, gp120 of HIV, damage-, inflammation-, and cancer-causing
        sulfated carbohydrates) and self structures (DNA, phospholipids, cell
        surface and extracellular matrix carbohydrates), which interacts with
        accessible sulfate and or phosphate groups, which are present on numerous
        compds., compns., and organisms. Pattern recognition of   ***DMBT1***
        is mediated via an 11-amino acid motif (GRVEVLYRGSW) that binds sulfate
        and phosphate groups. By acting as a dual-specific PRR,   ***DMBT1***
        may exert a general insulator function against a broad range of pathogens,

which predicts a contribution of   ***DMBT1***   germline deletions to
human susceptibility to infection, inflammation, and cancer. Furthermore,
a 40% decreased level of   ***DMBT1***   in male mice correlates with an
increased susceptibility and with a deficient protection against dextran
sulfate sodium-induced tissue damage and inflammation in the colon.
RE.CNT 7   THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
                ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16   ANSWER 12 OF 35 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation   on
      STN   DUPLICATE 10
AN   2005:324157 BIOSIS <<LOGINID::20090423>>
DN   PREV200510117337
TI   Generation of a vector system facilitating cloning of   ***DMBT1***
      variants and recombinant expression of functional full-length
        DMBT1   .
AU   End, Caroline; Lyer, Stefan; Renner, Marcus; Stahl, Cordula; Ditzer,
      Jutta; Holloschi, Andreas; Kuhn, Hella-M.; Flammann, Heiko T.;
        Poustka, Annemarie   ; Hafner, Mathias; Mollenhauer, Jan [Reprint
      Author]; Kioschis, Petra
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, Neuenheimer Feld 280,
      D-69120 Heidelberg, Germany
      j.mollenhauer@dkfz.de
SO   Protein Expression and Purification, (JUN 2005) Vol. 41, No. 2, pp.
      275-286.
      CODEN: PEXPEJ. ISSN: 1046-5928.
DT   Article
LA   English
ED   Entered STN: 25 Aug 2005
      Last Updated on STN: 25 Aug 2005
AB   Deleted in malignant brain tumours 1 (***DMBT1***) codes for a similar
      to 340 kDa glycoprotein with highly repetitive scavenger receptor
      cysteine-rich (SRCR) domains.   ***DMBT1***   was implicated in cancer.
      defence against viral and bacterial infections, and differentiation of
      epithelial cells. Recombinant expression and purification of
        DMBT1   is an essential step for systematic standardized functional
      research and towards the evaluation of its therapeutical potential. So
      far,   ***DMBT1***   is obtained from natural sources such as
      bronchioalveolar lavage or saliva, resulting in time consuming sample
      collection, low yields, and protein preparations which may substantially
      vary due to differential processing and genetic polymorphism, all of which
      impedes functional research on   ***DMBT1*** . Cloning of   ***DMBT1***
      cDNAs is hampered because of the size and the 13 highly homologous SRCR
      exons. In this Study, we report oil the setup of a vector system that
      facilitates cloning of   ***DMBT1***   variants. We demonstrate
      applicability of the vector system by expression of the largest
        DMBT1   variant in a tetracycline-inducible mammalian expression
      system using the Chinese hamster ovary cell line. Yields Lip to 30 mg
      rDMBT1 per litre of cell Culture supernatant could be achieved with an
      optimized production procedure. By harnessing the specific
      bacteria-binding property of   ***DMBT1***   we established an affinity
      purification procedure which allows the isolation of more than 3 mg rDMBT1
      with a Purity of about 95 %. Although the glycosylation moieties of
      rDMBT1 are different front   ***DMBT1***   (SAG) isolated front saliva, we
      demonstrate that rDMBT1 is functionally active in aggregating
      Gram-positive and Gram-negative bacteria and binding to C1q and
      lactoferrin, which represent two known endogenous   ***DMBT1***   ligands.
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AN   2005:69186   BIOSIS <<LOGINID::20090423>>
DN   PREV200500070157
TI   Bacteria binding by   ***DMBT1***   /SAG/gp-340 is confined to the
      VEVLXXXXW motif in its scavenger receptor cysteine-rich domains.
AU   Bikker, Floris J.; Ligtenberg, Antoon J. M. [Reprint Author]; End,
      Caroline; Renner, Marcus; Blaich, Stephanie; Lyer, Stefan; Wittig, Rainer;
      van't Hof, Wim; Veerman, Enno C. I.; Nazmi, Kamran; De Blieck-Hogervorst,
      Jolanda M. A.; Kioschis, Petra; Amerongen, Arie V. Nieuw;   ***Poustka,***
  ***   Annemarie***   ; Mollenhauer, Jan
CS   Acad Ctr Dent AmsterdamDept Oral Biochem, Free Univ Amsterdam,
      Boechorststr 7, NL-1081 BT, Amsterdam, Netherlands
      ajm.ligtenberg@vumc.nl
SO   Journal of Biological Chemistry, (November 12 2004) Vol. 279, No. 46, pp.
      47699-47703. print.
      CODEN: JBCHA3. ISSN: 0021-9258.
DT   Article
LA   English
ED   Entered STN: 16 Feb 2005
      Last Updated on STN: 16 Feb 2005
AB   The scavenger receptor cysteine-rich (SRCR) proteins form an archaic group
      of metazoan proteins characterized by the presence of SRCR domains. These
      proteins are classified in group A and B based on the number of conserved
      cysteine residues in their SRCR domains, i.e. six for group A and eight
      for group B. The protein   ***DMBT1***   (deleted in malignant brain
      tumors 1), which is identical to salivary agglutinin and lung gp-340,
      belongs to the group B SRCR proteins and is considered to be involved in
      tumor suppression and host defense by pathogen binding. In a previous
      study we used non-overlapping synthetic peptides covering the SRCR
      consensus sequence to identify a 16-amino acid bacteria-binding protein
      loop (peptide SRCRP2; QGRVEVLYRGSWGTVC) within the SRCR domains. In this
      study, using overlapping peptides, we pinpointed the minimal
      bacteria-binding site on SRCRP2, and thus   ***DMBT1***   , to an 11-amino
      acid motif (***DMBT1***   pathogen-binding site 1 or   ***DMBT1pbs1***
      ; GRVEVLYRGSW). An alanine substitution scan revealed that VEVL and Trp
      are critical residues in this motif. Bacteria binding by
        DMBT1pbs1   was different from the bacteria binding by the
      macrophage receptor MARCO in which an RXR motif was critical. In
      addition, the homologous consensus sequences of a number of SRCR proteins
      were synthesized and tested for bacteria binding. Only consensus
      sequences of   ***DMBT1***   orthologues bound bacteria by this motif.

AN   2009:102902   SCISEARCH <<LOGINID::20090423>>
GA   The Genuine Article (R) Number: V80CV
TI   THE PUTATIVE TUMOR SUPPRESSOR   ***DMBT1***   CONFERS MUCOSAL PROTECTION
      IN VIVO AND INHIBITS BACTERIAL INFECTION IN VITRO
AU   Renner, Marcus (Reprint); Bergmann, Gaby; Krebs, Inge; Lyer, Stefan; End,
      Caroline; Sina, Christian; Freidekind, Olga;   ***Poustka, Annemarie***   ;
      Mollenhauer, Jan
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, D-69120 Heidelberg,
      Germany
AU   End, Caroline; Kioschis, Petra; Haffner, Mathias
CS   Univ Appl Sci Mannheim, Inst Mol Biol & Cell Culture Technol, D-68163

Mannheim, Germany
AU   Helmke, Burkhard; Gassler, Nikolaus; Autschbach, Frank
CS   Univ Heidelberg, Inst Pathol, D-69120 Heidelberg, Germany
AU   Sina, Christian; Rosenstiel, Philip; Schreiber, Stefan
CS   Univ Hosp Schleswig Holstein, Dept Med 1, D-24105 Kiel, Germany
AU   Reinhard, Claudia; Stoeger, Tobias; Schulz, Holger
CS   Natl Ctr Environm & Hlth GmbH, Inst Inhalat Biol, D-85764 Neuherberg,
     Germany
AU   Hilberg, Frank
CS   Boehringer Ingelheim Austria, NCE Pharmacol, R&D Vienna, A-1121 Vienna,
     Austria
CYA Germany; Austria

AN   2004:130519 BIOSIS <<LOGINID::20090423>>
DN   PREV200400116079
TI   Carcinogen inducibility in vivo and down-regulation of   ***DMBT1***
     during breast carcinogenesis.
AU   Mollenhauer, Jan [Reprint Author]; Helmke, Burkhard; Medina, Daniel;
     Bergmann, Gaby; Gassler, Nikolaus; Mueller, Hanna; Lyer, Stefan;
     Diedrichs, Laura; Renner, Marcus; Wittig, Rainer; Blaich, Stephanie;
     Hamann, Ute; Madsen, Jens; Holmskov, Uffe; Bikker, Floris; Ligtenberg,
     Antoon; Carlen, Anette; Olsson, Jan; Otto, Herwart F.; O'Malley, Bert;
        Poustka, Annemarie
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
     Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
     j.mollenhauer@dkfz-heidelberg.de; j.mollenhauer@dkfz-heidelberg.de
AB   Deleted in malignant brain tumors 1 (***DMBT1***) has been proposed as
     a candidate tumor suppressor for brain and epithelial cancer. Initial
     studies suggested loss of expression rather than mutation as the
     predominant mode of ***DMBT1*** inactivation. However, in situ
     studies in lung cancer demonstrated highly sophisticated changes of
       DMBT1 expression and localization, pointing to a chronological
     order of events. Here we report on the investigation of   ***DMBT1***
     in breast cancer in order to test whether these principles might also be
     attributable to other tumor types. Comprehensive mutational analyses did
     not uncover unambiguous inactivating ***DMBT1*** mutations in breast
     cancer. Expression analyses in the human and mouse mammary glands pointed
     to the necessity of ***DMBT1*** induction. While age-dependent and

hormonal effects could be ruled out, 9 of 10 mice showed induction of
   Dmbt1   expression after administration of the carcinogen
7,12-dimethybenz(alpha)anthracene prior to the onset of tumorigenesis or
other histopathological changes.   ***DMBT1***   displayed significant
up-regulation in human tumor-flanking tissues compared to in normal breast
tissues (P < 0.05). However, the breast tumor cells displayed a switch
from lumenal secretion to secretion to the extracellular matrix and a
significant down-regulation compared to that in matched normal flanking
tissues (P < 0.01). We concluded that loss of expression also is the
predominant mode of   ***DMBT1***   inactivation in breast cancer. The
dynamic behavior of   ***DMBT1***   in lung carcinoma is fully reflected
in breast cancer, which suggests that this behavior might be common to
tumor types arising from monolayered epithelia.

L16   ANSWER 16 OF 35 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 13
AN   2004:221390 BIOSIS <<LOGINID::20090423>>
DN   PREV200400224388
TI   Site-characteristic expression and induction of trefoil factor family 1, 2
      and 3 and malignant brain tumor-1 in normal and diseased intrahepatic bile
      ducts relates to biliary pathophysiology.
AU   Sasaki, Motoko; Tsuneyama, Koichi; Saito, Takahito; Kataoka, Hiroaki;
      Mollenhauer, Jan;   ***Poustka, Annemarie***   ; Nakanuma, Yasuni [Reprint
      Author]
CS   Department of Human Pathology, Kanazawa University Graduate School of
      Medicine, Kanazawa, 920-8640, Japan
SO   Liver International, (February 2004) Vol. 24, No. 1, pp. 29-37. print.
      ISSN: 1478-3223 (ISSN print).
DT   Article
LA   English
ED   Entered STN: 21 Apr 2004
      Last Updated on STN: 21 Apr 2004
AB   Background/Aim: Trefoil factor family (TFF)1,2,3 are involved in a
      homeostasis/repair process of mucosal epithelia. In this study, the
      significance of TFF family and deleted in the malignant brain tumor-1 (
        DMBT1), a putative receptor of TFF2, in the intrahepatic biliary
      tree was investigated in normal and diseased livers. Materials and
      Methods: Expression of TFF1,2,3 and   ***DMBT1***   were examined
      immunohistochemically in primary biliary cirrhosis (PBC), primary
      sclerosing cholangitis (PSC), chronic viral hepatitis (CVH), extrahepatic
      biliary obstruction (EBO), and normal livers. Results: In normal livers,
      TFF1,3 and   ***DMBT1***   were infrequently detectable in large and
      rarely in small bile ducts, respectively. TFF2 was not detectable in
      large bile ducts. In large bile duct diseases (PSC and EBO), expression
      of TFF3 and   ***DMBT1***   were increased. In small bile duct diseases
      (PBC and CVH), expression of TFF2/   ***DMBT1***   was induced in
      moderately to severely damaged ducts irrespective of etiology.
      Conclusion: The intrahepatic biliary tree shows a site-characteristic
      expression and induction of TFF1,2,3 and   ***DMBT1***   . In large bile
      ducts, TFF1,3 were constitutively expressed and increased in pathologic
      bile ducts. In small bile ducts, TFF2/   ***DMBT1***   is induced in
      damaged ducts irrespective of etiologies. However, the
      cytoprotective/repair property of TFF2/   ***DMBT1***   may not be enough
      to prevent the following bile duct loss in PBC.

L16   ANSWER 17 OF 35 CAPLUS COPYRIGHT 2009 ACS on STN
AN   2004:759920 CAPLUS <<LOGINID::20090423>>

DN   141:258426
TI   ***DMBT1***   expression is down-regulated in breast cancer
AU   Braidotti, Paola; Nuciforo, Paolo G.; Mollenhauer, Jan;   ***Poustka,***
   ***   Annemarie*** ; Pellegrini, Caterina; Moro, Alessia; Bulfamante,
Gaetano;
      Coggi, Guido; Bosari, Silvano; Pietra, Giuseppe G.
CS   S.Paolo Hospital and IRCCS Ospedale Maggiore, University of Milano, School
      of Medicine, Milan, 20142, Italy
SO   BMC Cancer (2004), 4, No pp. given
      CODEN: BCMACL; ISSN: 1471-2407
      URL: http://www.biomedcentral.com/content/pdf/1471-2407-4-46.pdf
PB   BioMed Central Ltd.
DT   Journal; (online computer file)
LA   English
AB   Background: The authors studied the expression of   ***DMBT1***   (deleted
      in malignant brain tumor 1), a putative tumor suppressor gene, in normal,
      proliferative, and malignant breast epithelium and its possible relation
      to the cell cycle. Methods: Sections from 17 benign lesions and 55
      carcinomas were immunostained with anti   ***DMBT1***   antibody (
       DMBTh12) and sections from 36 samples, were double-stained also
      with anti MCM5, one of the 6 pre-replicative complex proteins with cell
      proliferation-licensing functions.   ***DMBT1***   gene expression at the
      mRNA level was assessed by RT-PCR in frozen tissues samples from 39
      patients. Results: Normal glands and hyperplastic epithelium in benign
      lesions displayed a luminal polarized   ***DMBTh12***   immunoreactivity.
      Normal and hyperplastic epithelium adjacent to carcinomas showed a loss of
      polarization, with immunostaining present in basal and perinuclear
      cytoplasmic compartments.   ***DMBT1***   protein expression was
      down-regulated in the cancerous lesions compared to the normal and/or
      hyperplastic epithelium adjacent to carcinomas (3/55 pos. carcinomas vs.
      33/42 pos. normal/hyperplastic epithelia; p = 0.0001). In 72% of cases
      RT-PCR confirmed immunohistochem. results. Most of normal and
      hyperplastic mammary cells pos. with   ***DMBTh12***   were also MCM5-pos.
      Conclusions: The redistribution and up-regulation of   ***DMBT1***   in
      normal and hyperplastic tissues flanking malignant tumors and its
      down-regulation in carcinomas suggests a potential role in breast cancer.
      Moreover, the concomitant expression of DMTB1 and MCM5 suggests its
      possible assocn. with the cell-cycle regulation.
RE.CNT 32   THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
                ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16   ANSWER 18 OF 35 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 14
AN   2003:400542 BIOSIS <<LOGINID::20090423>>
DN   PREV200300400542
TI   CRP-ductin, the mouse homologue of gp-340/deleted in malignant brain
      tumors 1 (***DMBT1***), binds gram-positive and gram-negative bacteria
      and interacts with lung surfactant protein D.
AU   Madsen, Jens; Tornoe, Ida; Nielsen, Ole; Lausen, Mette; Krebs, Inge;
      Mollenhauer, Jan; Kollender, Gaby;   ***Poustka, Annemarie*** ; Skjodt,
      Karsten; Holmskov, Uffe [Reprint Author]
CS   Immunology and Microbiology, Institute of Medical Biology, University of
      Southern Denmark, DK-5000, Odense C, Denmark
      uholmskov@health.sdu.dk
SO   European Journal of Immunology, (August 2003) Vol. 33, No. 8, pp.
      2327-2336. print.
      ISSN: 0014-2980 (ISSN print).

AB   CRP-ductin is a protein expressed mainly by mucosal epithelial cells in
      the mouse. Sequence homologies indicate that CRP-ductin is the mouse
      homologue of human gp-340, a glycoprotein that agglutinates microorganisms
      and binds the lung mucosal collectin surfactant protein-D (SP-D). Here we
      report that purified CRP-ductin binds human SP-D in a calcium-dependent
      manner and that the binding is not inhibited by maltose. The same
      properties have previously been observed for gp-340 binding of SP-D.
      CRP-ductin also showed calcium-dependent binding to both gram-positive and
      -negative bacteria. A polyclonal antibody raised against gp-340 reacted
      specifically with CRP-ductin in Western blots. Immuno-reactivity to
      CRP-ductin was found in the exocrine pancreas, in epithelial cells
      throughout the gastrointestinal tract and in the parotid ducts. A panel
      of RNA preparations from mouse tissues was screened for CRP-ductin and
      SP-D expression by reverse transcription-PCR. The pancreas was the main
      site of synthesis of CRP-ductin, but transcripts were also readily
      amplified from salivary gland, the gastrointestinal tract, liver, testis,
      uterus and lung. Lung was the main site of synthesis of SP-D, but
      transcripts were also amplified from uterus, salivary gland, thymus,
      thyroid gland, pancreas and testis. We conclude that CRP-ductin is the
      mouse homologue of human gp-340 and that its capacity to bind SP-D as well
      as gram-negative and gram-positive bacteria suggests a role in mucosal
      immune defense.

L16   ANSWER 19 OF 35 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 15
AN   2003:397953 BIOSIS <<LOGINID::20090423>>
DN   PREV200300397953
TI   Expression of deleted in malignant brain tumor-1 (***DMBT1***)
      molecule in biliary epithelium is augmented in hepatolithiasis: Possible
      participation in lithogenesis.
AU   Sasaki, Motoko; Huang, Shiu-Feng; Chen, Miin-Fu; Jan, Yi-Yin; Yeh, Ta-Sen;
      Ishikawa, Akira; Mollenhauer, Jan; ***Poustka, Annemarie*** ;
      Tsuneyama, Koichi; Nimura, Yuji; Oda, Koji; Nakanuma, Yasuni [Reprint
      Author]
CS   Department of Human Pathology, Graduate School of Medicine, Kanazawa
      University, Kanazawa, 920-8640, Japan
SO   Digestive Diseases and Sciences, (July 2003) Vol. 48, No. 7, pp.
      1234-1240. print.
      ISSN: 0163-2116 (ISSN print).
DT   Article
LA   English
ED   Entered STN: 27 Aug 2003
      Last Updated on STN: 27 Aug 2003
AB   Deleted in malignant brain tumor-1 (***DMBT1***) is a mucin-like
      molecule participating in mucosal immune defense. Given that bovine
      gallbladder mucin, which accelerates cholesterol crystallization, is a
       DMBT1   homolog, ***DMBT1***   expression was examined
      immunohistochemically in biliary epithelial cells in livers with
      hepatolithiasis (N=25), primary sclerosing cholangitis (N=7), large bile
      duct obstruction (N=12), and control normal livers (N=10).   ***DMBT1***
      protein was determined in the hepatic bile samples of hepatolithiasis
      (N=12) and other hepatobiliary diseases (N=8) by immunoblot. While
       DMBT1   was faintly expressed in normal livers (20%), it was

significantly augmented in hepatolithiasis (76%) (P<0.05).   ***DMBT1***
was mildly expressed in primary sclerosing cholangitis and large bile duct
obstruction.   ***DMBT1***   protein was detected frequently in hepatic
bile samples of hepatolithiasis (50%) (P<0.05), but in the other bile
samples. The percentage of cholesterol in intrahepatic calculi was
significantly higher in the patients with ***DMBT1*** -positive bile.
Augmented expression and secretion of ***DMBT1***   in intrahepatic
large bile ducts in hepatolithiasis suggests its role in lithogenesis.

L16 ANSWER 20 OF 35 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
     STN   DUPLICATE 16
AN   2003:247369 BIOSIS <<LOGINID::20090423>>
DN   PREV200300247369
TI   Frequent downregulation of ***DMBT1***   and galectin-3 in epithelial
     skin cancer.
AU   Mollenhauer, Jan [Reprint Author]; Deichmann, Martin; Helmke, Burkhard;
     Mueller, Hanna; Kollender, Gaby; Holmskov, Uffe; Ligtenberg, Toon; Krebs,
     Inge; Wiemann, Stefan; Bantel-Schaal, Ursula; Madsen, Jens; Bikker,
     Floris; Klauck, Sabine M.; Otto, Herwart F.; Moldenhauer, Gerd;
        Poustka, Annemarie
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
     Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
     j.mollenhauer@dkfz.de
SO   International Journal of Cancer, (10 June 2003) Vol. 105, No. 2, pp.
     149-157. print.
     CODEN: IJCNAW. ISSN: 0020-7136.
DT   Article
LA   English
ED   Entered STN: 21 May 2003
     Last Updated on STN: 21 May 2003
AB   ***DMBT1***   and galectin-3 are potential interacting proteins with
     presumably complex roles in tumorigenesis. While at present a variety of
     mechanisms are discussed for ***DMBT1***   and its participation in
     cancer, galectin-3 is commonly known to exert tumor-promoting effects.
     However, in vitro studies in a rodent system have suggested that
      DMBT1 /galectin-3 interaction in the ECM triggers epithelial
     differentiation, which would point to tumor-suppressive properties. To
     improve the understanding of ***DMBT1*** /galectin-3 action in cancer,
     we carried out studies in skin cancer of different origins. Mutational
     analyses of ***DMBT1***   identified a missense mutation in 1 of 13
     melanoma cell lines. It led to an exchange of an evolutionary conserved
     proline residue for serine and located within the second CUB domain of
      DMBT1 . Immunohistochemical analyses demonstrated absence of
      DMBT1 /galectin-3 expression from melanocytes but induction of
      DMBT1   expression in 1 of 8 nevi and 1 of 11 melanomas and of
     galectin-3 expression in 3 of 8 nevi and 4 of 8 melanomas. These data
     suggest that ***DMBT1***   and galectin-3 are unlikely to act as
     classical tumor suppressors in melanomas.   ***DMBT1***   and galectin-3
     appear to be secreted to the ECM by epithelial cells within the epidermis
     and the hair follicle. Compared to the flanking normal epidermis, skin
     tumors of epithelial origin frequently displayed downregulation of
      DMBT1   (18 of 19 cases) and galectin-3 (12 of 12 cases). Thus,
     loss of ***DMBT1*** /galectin-3 expression may play a role in the
     genesis of epithelial skin cancer. This would support the view that
     galectin-3 can exert tumor-suppressive effects in certain scenarios, and
      DMBT1 /galectin-3-mediated differentiation represents a candidate
     mechanism for this effect.

AN   2003:584033   BIOSIS <<LOGINID::20090423>>
DN   PREV200300583256
TI   The potential functional dualism of   ***DMBT1***   : Epithelial
       differentiation and pathogen-binding.

AU   Mollenhauer, Jan [Reprint Author]; Bikker, Floris; Helmke, Burkhard;
       Kollender, Gaby [Reprint Author]; Lyer, Stefan [Reprint Author]; Renner,
       Marcus [Reprint Author]; Ligtenberg, Antoon; Madsen, Jens; Holmskov, Uffe;
       Otto, Herwart F.;   ***Poustka, Annemarie***   [Reprint Author]
CS   Department for Molecular Genome Analysis, Deutsches
       Krebsforschungszentrum, Heidelberg, Germany
SO   International Journal of Molecular Medicine, (2003) Vol. 12, No.
       Supplement 1, pp. S9. print.
       Meeting Info.: 8th World Congress on Advances in Oncology and 6th
       International Symposium on Molecular Medicine. Crete, Greece. October
       16-18, 2003.
       ISSN: 1107-3756 (ISSN print).
DT   Conference; (Meeting)
       Conference; Abstract; (Meeting Abstract)
LA   English
ED   Entered STN: 10 Dec 2003
       Last Updated on STN: 10 Dec 2003

AN   2002:535766   BIOSIS <<LOGINID::20090423>>
DN   PREV200200535766
TI   Identification of the bacteria-binding peptide domain on salivary
       agglutinin (gp-340/   ***DMBT1***   ), a member of the scavenger receptor
       cysteine-rich superfamily.

AU   Bikker, Floris J. [Reprint author]; Ligtenberg, Antoon J. M.; Nazmi,
       Kamran; Veerman, Enno C. I.; van't Hof, Wim; Bolscher, Jan G. M.;
          Poustka, Annemarie   ; Amerongen, Arie V. Nieuw; Mollenhauer, Jan
CS   Van der Boechorststraat 7, 1081 BT, Amsterdam, Netherlands
       fj.bikker.obc.acta@med.vu.nl
SO   Journal of Biological Chemistry, (August 30, 2002) Vol. 277, No. 35, pp.
       32109-32115. print.
       CODEN: JBCHA3. ISSN: 0021-9258.
DT   Article
LA   English
ED   Entered STN: 16 Oct 2002
       Last Updated on STN: 16 Oct 2002
AB   Salivary agglutinin is encoded by   ***DMBT1***   and identical to gp-340,
       a member of the scavenger receptor cysteine-rich (SRCR) superfamily.
       Salivary agglutinin/DAMBT1 is known for its Streptococcus mutans
       agglutinating properties. This 300-400 kDa glycoprotein is composed of
       conserved peptide motifs: 14 SRCR domains that are separated by
       SRCR-interspersed domains (SIDs), 2 CUB (C1r/C1s Uegf Bmp1) domains, and a
       zona pellucida domain. We have searched for the peptide domains of
       agglutinin/   ***DMBT1***   responsible for bacteria binding. Digestion
       with endoproteinase Lys-C resulted in a protein fragment containing
       exclusively SRCR and SID domains that binds to S. mutans. To define more
       closely the S. mutans-binding domain, consensus-based peptides of the SRCR
       domains and SIDs were designed and synthesized. Only one of the SRCR
       peptides, designated SRCRP2, and none of the SID peptides bound to S.

mutans. Strikingly, this peptide was also able to induce agglutination of
S. mutans and a number of other bacteria. The repeated presence of this
peptide in the native molecule endows agglutinin/ ***DMBT1***   with a
general bacterial binding feature with a multivalent character. Moreover,
our studies demonstrate for the first time that the polymorphic SRCR
domains of salivary agglutinin/ ***DMBT1***   mediate ligand
interactions.

L16   ANSWER 23 OF 35 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 18
AN   2002:497292 BIOSIS <<LOGINID::20090423>>
DN   PREV200200497292
TI   Rare mutations of the   ***DMBT1***   gene in human astrocytic gliomas.
AU   Mueller, Wolf; Mollenhauer, Jan; Stockhammer, Florian;   ***Poustka,***
   ***   Annemarie*** ; von Deimling, Andreas [Reprint author]
CS   Institute for Neuropathology, Charite Humboldt University, D-13353,
      Berlin, Germany
      andreas.von_deimling@charite.de
SO   Oncogene, (29 August, 2002) Vol. 21, No. 38, pp. 5956-5959. print.
      CODEN: ONCNES. ISSN: 0950-9232.
DT   Article
LA   English
ED   Entered STN: 25 Sep 2002
      Last Updated on STN: 25 Sep 2002
AB   The Deleted in Malignant Brain Tumors 1 gene (***DMBT1***) has been
      proposed as a tumor suppressor gene candidate in human brain tumors, based
      on the observation of homozygous deletions affecting the   ***DMBT1***
      region or part of the gene. In order to support this hypothesis, we
      performed a mutational analysis of the entire coding region of
       DMBT1 , employing SSCP analysis and direct DNA sequencing in a
      series of 79 astrocytic gliomas. Five somatic mutations were detected.
      Two mutations, one of which resulted in an amino acid exchange, occurred
      in glioblastomas. One pilocytic astrocytoma carried two missense
      mutations and another pilocytic astrocytoma contained a somatic mutation,
      not affecting the presumed protein. In addition, 21 of the 27 single
      nucleotide polymorphisms identified in this study have not been recognized
      previously. The data indicate, that small mutations are not a frequent
      finding in gliomas.

L16   ANSWER 24 OF 35 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 19
AN   2003:427580 BIOSIS <<LOGINID::20090423>>
DN   PREV200300427580
TI   An integrative model on the role of   ***DMBT1***   in epithelial cancer.
AU   Mollenhauer, Jan [Reprint Author]; Helmke, Burkhard; Mueller, Hanna;
      Kollender, Gaby; Krebs, Inge; Wiemann, Stefan; Holmskov, Uffe; Madsen,
      Jens; Otto, Herwart F.;   ***Poustka, Annemarie***
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
      Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
      j.mollenhauer@dkfz.de
SO   Cancer Detection and Prevention, (2002) Vol. 26, No. 4, pp. 266-274.
      print.
      CODEN: CDPRD4. ISSN: 0361-090X.
DT   Article
LA   English
ED   Entered STN: 17 Sep 2003
      Last Updated on STN: 17 Sep 2003

AB   The gene, deleted in malignant brain tumors 1 (***DMBT1***), has been
        proposed to play a role in brain and epithelial cancer, but shows unusual
        features for a classical tumor suppressor gene. We have proposed that its
        presumptive dual function in protection and differentiation is of
        importance to understand its role in cancer. To gain insights into its
        role in tumorigenesis, we conducted a comprehensive study on   ***DMBT1***
        mutations, expression and location. Twenty-one out of 44 tumors showed
        variable numbers of tandem repeats (VNTRs) due to genetic polymorphism of
         DMBT1 , whereas 11 out of 44 tumors displayed presumable
mutations.
        However, none of the alterations would be predicted to lead to a complete
        inactivation of the gene.   ***DMBT1***   is mucin-like and shows
        tissue-specific expression and secretion, pointing to a function in the
        protection of monolayered epithelia and to an additional function in the
        differentiation of multilayered epithelia. The expression patterns in
        carcinomas arising from the respective structures support this view.
        Accepting this functional dualism gives rise to an initial model on the
        role of   ***DMBT1***   in epithelial cancer.

AN   2002:529538 BIOSIS <<LOGINID::20090423>>
DN   PREV200200529538
TI   The SRCR/SID region of   ***DMBT1***   defines a complex multi-allele
        system representing the major basis for its variability in cancer.
AU   Mollenhauer, Jan [Reprint author]; Mueller, Hanna; Kollender, Gaby; Lyer,
        Stefan; Diedrichs, Laura; Helmke, Burkhard; Holmskov, Uffe; Ligtenberg,
        Toon; Herbertz, Stephan; Krebs, Inge; Madsen, Jens; Bikker, Floris;
        Schmitt, Liane; Wiemann, Stefan; Scheurlen, Wolfram; Otto, Herwart F.; von
        Deimling, Andreas;   ***Poustka, Annemarie***
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
        Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
        j.mollenhauer@dkfz.de
SO   Genes Chromosomes and Cancer, (November, 2002) Vol. 35, No. 3, pp.
        242-255. print.
        CODEN: GCCAES. ISSN: 1045-2257.
DT   Article
LA   English
ED   Entered STN: 16 Oct 2002
        Last Updated on STN: 16 Oct 2002
AB   Deleted in malignant brain tumors 1 (***DMBT1***) at 10q25.3-q26.1 has
        been proposed as a candidate tumor-suppressor gene for brain and
        epithelial cancer.   ***DMBT1***   encodes a multifunctional mucin-like
        protein presumably involved in epithelial differentiation and protection.
        The gene consists of highly homologous and repeating exon and intron
        sequences. This specifically applies to the region coding for the
        repetitive scavenger receptor cysteine-rich (SRCR) domains and
        SRCR-interspersed domains (SIDs) that constitutes the major part of the
        gene. This particular structure may previously have interfered with the
        delineation of   ***DMBT1***   alterations in cancer. Uncovering these,
        however, is of mechanistic importance. By a combined approach, we
        conducted a detailed mutational analysis, starting from a panel of 51
        tumors, including 46 tumor cell lines and five primary tumors.
        Alterations in the repetitive region were present in 22/31 (71%) tumors
        that were investigated in detail. Six tumors showed presumably de novo
        mutations, among these three with point mutations in combination with a
        loss of heterozygosity. However, none of the alterations unambiguously

would be predicted to lead to an inactivation of ***DMBT1*** . We
define seven distinct ***DMBT1*** alleles based on variable numbers of
tandem repeats (VNTRs). At least 11 tumors exclusively harbored these
VNTRs. The data suggest that the SRCR/SID region defines a complex
multi-allele system that has escaped previous analyses and that represents
the major basis for the variability of ***DMBT1*** in cancer.
DMBT1 thus compares to mucins rather than to conventional tumor
suppressors.

AN   2002:471853 BIOSIS <<LOGINID::20090423>>
DN   PREV200200471853
TI   Sequential changes of the ***DMBT1*** expression and location in
      normal lung tissue and lung carcinomas.
AU   Mollenhauer, Jan [Reprint author]; Helmke, Burkhard; Mueller, Hanna;
      Kollender, Gaby; Lyer, Stefan; Diedrichs, Laura; Holmskov, Uffe;
      Ligtenberg, Toon; Herbertz, Stephan; Krebs, Inge; Wiemann, Stefan; Madsen,
      Jens; Bikker, Floris; Schmitt, Liane; Otto, Herwart F.; ***Poustka,***
   ***   Annemarie***
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
      Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
      j.mollenhauer@dkfz.de
SO   Genes Chromosomes and Cancer, (October, 2002) Vol. 35, No. 2, pp. 164-169.
      print.
      CODEN: GCCAES. ISSN: 1045-2257.
DT   Article
LA   English
ED   Entered STN: 11 Sep 2002
      Last Updated on STN: 11 Sep 2002
AB   Deleted in Malignant Brain Tumors 1 (***DMBT1***) at chromosome region
      10q25.3-q26.1 has been proposed as a candidate tumor-suppressor gene for
      brain, digestive tract, and lung cancer. Recent studies on its expression
      in lung cancer have led to divergent results and have raised a
      controversial discussion. Moreover, ***DMBT1*** has been implicated
      with epithelial protection in the respiratory tract. We thus wondered how
      a loss of its expression could be related to carcinogenesis in the lung.
      To address these issues, we investigated the ***DMBT1*** expression
      and location in the normal lung and lung cancer. By reverse-transcription
      PCR, a down-regulation of the ***DMBT1*** expression in lung cancer
      cell lines is commonly detected. Immunohistochemical studies in situ
      demonstrate that there are also low steady-state levels of ***DMBT1***
      in the normal respiratory epithelium. However, an up-regulation takes
      place in the tumor-flanking epithelium and upon respiratory inflammation.
      Lung carcinomas show increased ***DMBT1*** expression compared to that
      of undiseased lung tissue, but decreased ***DMBT1*** levels compared
      to that of tumor-flanking and inflammatory tissue. A switch from a
      lumenal secretion to a secretion to the extracellular matrix takes place
      during lung carcinogenesis. Our data may resolve the controversial
      discussion on its expression in lung carcinomas. We hypothesize that the
      changes of the ***DMBT1*** expression and location do reflect a time
      course that may point to possible mechanisms for its role in epithelial
      cancer.

AN   2002:584258 BIOSIS <<LOGINID::20090423>>

DN   PREV200200584258
TI   ***DMBT1***   and breast cancer.
AU   Mollenhauer, Jan [Reprint author]; Helmke, Burkhard; Kollender, Gaby
      [Reprint author]; Mueller, Hanna [Reprint author]; Wiemann, Stefan
      [Reprint author]; Holmskov, Uffe; Madsen, Jens; Otto, Herwart F.; Medina,
      Daniel; O'Malley, Bert W.;   ***Poustka, Annemarie***   [Reprint author]
CS   Department for Molecular Genome Analysis, Deutsches
      Krebsforschungszentrum, Heidelberg, Germany
SO   International Journal of Molecular Medicine, (2002) Vol. 10, No.
      Supplement 1, pp. S82. print.
      Meeting Info.: 7th World Congress on Advances in Oncology and the 5th
      International Symposium on Molecular Medicine. Hersonissos, Crete, Greece.
      October 10-12, 2002.
      ISSN: 1107-3756.
DT   Conference; (Meeting)
      Conference; Abstract; (Meeting Abstract)
LA   English
ED   Entered STN: 13 Nov 2002
      Last Updated on STN: 13 Nov 2002

L16   ANSWER 28 OF 35 BIOSIS   COPYRIGHT (c) 2009 The Thomson Corporation   on
      STN   DUPLICATE 22
AN   2002:69136 BIOSIS <<LOGINID::20090423>>
DN   PREV200200069136
TI   Deleted in malignant brain tumors 1 is a versatile mucin-like molecule
      likely to play a differential role in digestive tract cancer.
AU   Mollenhauer, Jan; Herbertz, Stephan; Helmke, Burkhard; Kollender, Gaby;
      Krebs, Inge; Madsen, Jens; Holmskov, Uffe; Sorger, Karin; Schmitt, Liane;
      Wiemann, Stefan; Otto, Herwart F.; Groene, Hermann-Josef;   ***Poustka,***
    ***   Annemarie***   [Reprint author]
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
      Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
SO   Cancer Research, (December 15, 2001) Vol. 61, No. 24, pp. 8880-8886.
      print.
      CODEN: CNREA8. ISSN: 0008-5472.
DT   Article
LA   English
ED   Entered STN: 16 Jan 2002
      Last Updated on STN: 25 Feb 2002
AB   Deleted in Malignant Brain Tumors 1 (***DMBT1***   ) has been proposed as
      a candidate tumor suppressor gene for brain, lung, and digestive tract
      cancer. In particular, alterations of the gene and/or a loss of
      expression have been observed in gastric, colorectal, and esophageal
      carcinomas. Initial evidence has accumulated that   ***DMBT1***   may
      represent a multifunctional protein. Because the consequences of a loss
      of   ***DMBT1***   function may be different depending on its original
      function in a particular tissue, we wondered if it is appropriate to
      assume a uniform role for   ***DMBT1***   in digestive tract carcinomas.
      We hypothesized that a systematic characterization of   ***DMBT1***   in
      the human alimentary tract would be useful to improve the understanding of
      this molecule and its role in digestive tract carcinomas. Our data
      indicate that the expression pattern and subcellular distribution of
       DMBT1   in the human alimentary tract is reminiscent of epithelial
      mucins. Bovine gallbladder mucin is identified as the   ***DMBT1***
      homologue in cattle. An elaborate alternative splicing may generate a
      great variety of   ***DMBT1***   isoforms. Monolayered epithelia display
      transcripts of 6 kb and larger, and generally show a lumenal secretion of

DMBT1   indicating a role in mucosal protection. The esophagus is
the only tissue displaying an additional smaller transcript of apprx5 kb.
The stratified squamous epithelium of the esophagus is the only epithelium
showing a constitutive targeting of ***DMBT1*** to the extracellular
matrix (ECM) suggestive of a role in epithelial differentiation. Squamous
cell carcinomas of the esophagus show an early loss of ***DMBT1***
expression. In contrast, adenocarcinomas of the esophagus commonly
maintain higher ***DMBT1*** expression levels. However, presumably
subsequent to a transition from the lumenal secretion to a targeting to
the ECM, a loss of ***DMBT1*** expression also takes place in
adenocarcinomas. Regarding ***DMBT1*** as a mucin-like molecule is a
new perspective that is instructive for its functions and its role in
cancer. We conclude that ***DMBT1*** is likely to play a differential
role in the genesis of digestive tract carcinomas. However, although
  DMBT1   originally has divergent functions in monolayered and
multilayered epithelia, carcinogenesis possibly converges in a common
pathway that requires an inactivation of its functions in the ECM.

L16   ANSWER 29 OF 35 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN
AN   2001:578133 BIOSIS <<LOGINID::20090423>>
DN   PREV200100578133
TI   Mutational analysis and characterization of ***DMBT1*** : A versatile
      molecular fly-paper.
AU   Mollenhauer, Jan [Reprint author]; Helmke, Burkhard; Mueller, Hanna
      [Reprint author]; Kollender, Gaby [Reprint author]; Herbertz, Stefan
      [Reprint author]; Krebs, Inge [Reprint author]; Wiemann, Stefan [Reprint
      author]; Holmskov, Uffe; Madsen, Jens; Otto, Herwart F.;   ***Poustka,***
   ***   Annemarie***   [Reprint author]
CS   Department for Molecular Genome Analysis, Deutsches
      Krebsforschungszentrum, Im Neuenheimer Feld 280, 69120, Heidelberg,
      Germany
SO   International Journal of Molecular Medicine, (2001) Vol. 8, No. Supplement
      1, pp. S9. print.
      Meeting Info.: 6th World Congress on Advances in Oncology, and the 4th
      International Symposium on Molecular Medicine. Hersonissos, Crete, Greece.
      October 18-20, 2001.
      ISSN: 1107-3756.
DT   Conference; (Meeting)
      Conference; Abstract; (Meeting Abstract)
LA   English
ED   Entered STN: 12 Dec 2001
      Last Updated on STN: 25 Feb 2002

L16   ANSWER 30 OF 35 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 23
AN   2000:188628 BIOSIS <<LOGINID::20090423>>
DN   PREV200000188628
TI   ***DMBT1***   encodes a protein involved in the immune defense and in
      epithelial differentiation and is highly unstable in cancer.
AU   Mollenhauer, Jan [Reprint author]; Herbertz, Stephan; Holmskov, Uffe;
      Tolnay, Markus; Krebs, Inge; Merlo, Adrian; Schroder, Henrik Daa; Maier,
      Daniel; Breitling, Frank; Wiemann, Stefan; Groene, Hermann-Josef;
       Poustka, Annemarie
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
      Im Neuenheimer Feld 280, Kst. H0600, 69120, Heidelberg, Germany
SO   Cancer Research, (March 15, 2000) Vol. 60, No. 6, pp. 1704-1710. print.

CODEN: CNREA8. ISSN: 0008-5472.
DT   Article
LA   English
ED   Entered STN: 11 May 2000
      Last Updated on STN: 4 Jan 2002
AB   The gene deleted in malignant brain tumors 1 (***DMBT1***) has been
      proposed as a candidate tumor suppressor for brain, gastrointestinal, and
      lung cancer. It codes for a protein of unknown function belonging to the
      superfamily of scavenger receptor cysteine-rich proteins. We aimed at
      getting insights into the functions of ***DMBT1*** by expression
      analyses and studies with a monoclonal antibody against the protein. The
        DMBT1 mRNA is expressed throughout the immune system, and Western
      blot studies demonstrated that isoforms of ***DMBT1*** are identical
      to the collectin-binding protein gp-340, a glycoprotein that is involved
      in the respiratory immune defense. Immunohistochemical analyses revealed
      that ***DMBT1*** is produced by both tumor-associated macrophages and
      tumor cells and that it is deregulated in glioblastoma multiforme in
      comparison to normal brain tissue. Our data further suggest that the
      proteins CRP-ductin and hensin, both of which have been implicated in
      epithelial differentiation, are the ***DMBT1*** orthologs in mice and
      rabbits, respectively. These findings and the spatial and temporal
      distribution of ***DMBT1*** in fetal and adult epithelia suggest that
        DMBT1 further plays a role in epithelial development.
      Rearrangements of ***DMBT1*** were found in 16 of 18 tumor cell lines,
      and hemizygous deletions were observed in a subset of normal individuals,
      indicating that the alterations in tumors may be a result of both
      pre-existing deletions uncovered by a loss of heterozygosity and secondary
      changes acquired during tumorigenesis. Thus, ***DMBT1*** is a gene
      that is highly unstable in cancer and encodes for a protein with at least
      two different functions, one in the immune defense and a second one in
      epithelial differentiation.

L16   ANSWER 31 OF 35 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 24
AN   2000:368358 BIOSIS <<LOGINID::20090423>>
DN   PREV200000368358
TI   Comprehensive allelotype and genetic analysis of 466 human nervous system
      tumors.
AU   von Deimling, Andreas [Reprint author]; Fimmers, Rolf; Schmidt, Matthias
      C.; Bender, Bernhard; Fassbender, Frank; Nagel, Judith; Jahnke, Rolf;
      Kaskel, Peter; Duerr, Eva-Maria; Koopmann, Jens; Maintz, David; Steinbeck,
      Stephanie; Wick, Wolfgang; Platten, Michael; Mueller, Daniel J.; Przkora,
      Rene; Waha, Andreas; Bluemcke, Britta; Wellenreuther, Ruth;
      Meyer-Puttlitz, Birgit; Schmidt, Ortrud; Mollenhauer, Jan; ***Poustka,***
      ***   Annemarie*** ; Stangl, Armin P.; Lenartz, Doris; von Ammon, Klaus;
      Henson, John W.; Schramm, Johannes; Louis, David N.; Wiestler, Otmar D.
CS   Institut fuer Neuropathologie, Charite Humboldt University, Augustenburger
      Platz 1, Campus Virchow Klinikum, D-13353, Berlin, Germany
SO   Journal of Neuropathology and Experimental Neurology, (June, 2000) Vol.
      59, No. 6, pp. 544-558. print.
      CODEN: JNENAD. ISSN: 0022-3069.
DT   Article
LA   English
ED   Entered STN: 23 Aug 2000
      Last Updated on STN: 8 Jan 2002
AB   Brain tumors pose a particular challenge to molecular oncology. Many
      different tumor entities develop in the nervous system and some of them

appear to follow distinct pathogenic routes. Molecular genetic
alterations have increasingly been reported in nervous system neoplasms.
However, a considerable number of affected genes remain to be identified.
We present here a comprehensive allelotype analysis of 466 nervous system
tumors based on loss of heterozygosity (LOH) studies with 129
microsatellite markers that span the genome. Specific alterations of the
EGFR, CDK4, CDKN2A, TP53,   ***DMBT1*** , NF2, and PTEN genes were
analyzed in addition. Our data point to several novel genetic loci
associated with brain tumor development, demonstrate relationships between
molecular changes and histopathological features, and further expand the
concept of molecular tumor variants in neuro-oncology. This catalogue may
provide a valuable framework for future studies to delineate molecular
pathways in many types of human central nervous system tumors.

L16   ANSWER 32 OF 35   CAPLUS   COPYRIGHT 2009 ACS on STN
AN   1999:811566   CAPLUS <<LOGINID::20090423>>
DN   132:45802
TI   Nonhuman mammal with inactivated or inactivatable SCUZ protein gene
IN   Mollenhauer, Jan;   ***Poustka, Annemarie*** ; Krebs, Inge
PA   Deutsches Krebsforschungszentrum Stiftung des Oeffentlichen Rechts,
      Germany
SO   Ger., 14 pp.
      CODEN: GWXXAW
DT   Patent
LA   German
FAN.CNT 1
      PATENT NO.   KIND   DATE   APPLICATION NO.   DATE
      ---------------   ----   -------- --------------------   --------
PI   DE 19829660   C1   19991223 DE 1998-19829660   19980702
      WO 2000001814   A2   20000113 WO 1999-DE2055   19990630
      WO 2000001814   A3   20000420
          W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DK,
              EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
              KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW,
              MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR,
              TT, UA, UG, US, UZ, VN, YU, ZW
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
             ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
             CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
      AU 9958478   A   20000124 AU 1999-58478   19990630
PRAI DE 1998-19829660   A   19980702
      WO 1999-DE2055   W   19990630
AB   The title transgenic mammal is disclosed. SCUZ proteins contain an SRCR
      (scavenger receptor cysteine-rich) domain and protein interaction domains
      CUB and ZP. The gene may the   ***DMBT1***   gene, or may encode CRP
      ductin or ebnerin. These transgenic mammals may be used to screen for
      carcinoma inhibitors. Thus, a transgenic mouse contg. a Cre
      recombinase-inactivatable CRP ductin gene was created.
RE.CNT 1   THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16   ANSWER 33 OF 35   BIOSIS   COPYRIGHT (c) 2009 The Thomson Corporation   on
      STN   DUPLICATE 25
AN   1999:468769   BIOSIS <<LOGINID::20090423>>
DN   PREV199900468769
TI   Cloning of gp-340, a putative opsonin receptor for lung surfactant protein
      D.

AU   Holmskov, Uffe [Reprint author]; Mollenhauer, Jan; Madsen, Jens; Vitved,
      Lars; Gronlund, Jorn; Tornoe, Ida; Kliem, Anette; Reid, Kenneth B. M.;
        Poustka, Annemarie ; Skjodt, Karsten
CS   Department of Immunology and Microbiology, Institute of Medical Biology,
      University of Southern Denmark, Winslowparken 19.1, DK-5000, Odense,
      Denmark
SO   Proceedings of the National Academy of Sciences of the United States of
      America, (Sept. 14, 1999) Vol. 96, No. 19, pp. 10794-10799. print.
      CODEN: PNASA6. ISSN: 0027-8424.
DT   Article
LA   English
ED   Entered STN: 9 Nov 1999
      Last Updated on STN: 9 Nov 1999
AB   Surfactant protein D (SP-D) is an oligomeric C type lectin that promotes
      phagocytosis by binding to microbial surface carbohydrates. A 340-kDa
      glycoprotein (gp-340) has been shown to bind SP-D in the presence of
      calcium but does so independently of carbohydrate recognition. This
      protein exists both in a soluble form and in association with the
      membranes of alveolar macrophages. The primary structure of gp-340 has
      been established by molecular cloning, which yielded a 7,686-bp cDNA
      sequence encoding a polypeptide chain of 2,413 amino acids. The domain
      organization features 13 scavenger receptor cysteine-rich (SRCR) domains,
      each separated by an SRCR-interspersed domain, except for SRCRs 4 and 5,
      which are contiguous. The 13 SRCR domains are followed by two C1r/C1s
      Uegf Bmp1 domains separated by a 14th SRCR domain and a zona pellucida
      domain. gp-340 seems to be an alternative spliced form of   ***DMBT1*** .
      Reverse transcription-PCR analysis showed that the main sites of synthesis
      of gp-340 are lung, trachea, salivary gland, small intestine, and stomach.
      Immunohistochemistry revealed strong staining for gp-340 in alveolar and
      other tissue macrophages. Immunostaining of the macrophage membrane was
      either uniform or focal in a way that suggested capping, whereas other
      macrophages showed strong intracellular staining within the
      phagosome/phagolysosome compartments. In some macrophages, SP-D and
      gp-340 were located in the same cellular compartment. Immunoreactive
      gp-340 was also found in epithelial cells of the small intestine and in
      the ducts of salivary glands. The distribution of gp-340 in macrophages
      is compatible with a role as an opsonin receptor for SP-D.

L16   ANSWER 34 OF 35 CAPLUS COPYRIGHT 2009 ACS on STN
AN   1998:493676 CAPLUS <<LOGINID::20090423>>
DN   129:120695
OREF 129:24702a
TI   A protein containing a scavenger receptor cytosine-rich domain of human
      fetal lung and a cDNA encoding it
IN   Mollenhauer, Jan;   ***Poustka, Annemarie***
PA   Deutsches Krebsforschungszentrum Stiftung des Offentlichen Rechts,
      Germany; Mollenhauer, Jan; Poustka, Annemarie
SO   PCT Int. Appl., 55 pp.
      CODEN: PIXXD2
DT   Patent
LA   German
FAN.CNT 1
      PATENT NO.   KIND   DATE   APPLICATION NO.   DATE
      ---------------   ----   -------- --------------------   --------
PI   WO 9830687   A2   19980716 WO 1998-DE96   19980109
      WO 9830687   A3   19980911
         W: JP, US

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        RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
      DE 19730997        C1      19980924    DE 1997-19730997        19970718
      EP 1015583         A2      20000705    EP 1998-905246          19980109
      EP 1015583         B1      20051019
          R:  AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE
      JP 2001509667      T       20010724    JP 1998-530469          19980109
      AT 307201          T       20051115    AT 1998-905246          19980109
      US 6346606         B1      20020212    US 1999-341587          19990831
PRAI  DE 1997-19700519   A       19970109
      DE 1997-19730997   A       19970718
      WO 1998-DE96       W       19980109
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AB   A protein contg. a scavenger receptor cytosine-rich domain is identified
     in human fetal lung and a cDNA encoding it is cloned. The cDNA was cloned
     from a human fetal lung library by PCR. A partial cDNA was obtained by
     PCR using primers recognizing SRCR and CUB1 domain coding sequences. The
     gene shows deletions in brain tumors.

L16 ANSWER 35 OF 35 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
     STN   DUPLICATE 26
AN   1997:439001 BIOSIS <<LOGINID::20090423>>
DN   PREV199799738204
TI   ***DMBT1*** , a new member of the SRCR superfamily, on chromosome
     10q25.3-26.1 is deleted in malignant brain tumours.
AU   Mollenhauer, Jan; Wiemann, Stefan; Scheurlen, Wolfram; Korn, Bernhard;
     Hayashi, Yutaka; Wilgenbug, Klaus K.; Von Deimling, Andreas;
Poustka,
   ***   Annemarie***   [Reprint author]
CS   Div. Molecular Genome Analysis, Deutsches Krebsforschungszentrum, Im
     Neuenheimer Feld 280, D-69120 Heidelberg, Germany
SO   Nature Genetics, (1997) Vol. 17, No. 1, pp. 32-39.
     ISSN: 1061-4036.
DT   Article
LA   English
ED   Entered STN: 8 Oct 1997
     Last Updated on STN: 8 Oct 1997

AB   Loss of sequences from human chromosome 10q has been associated with the
     progression of human cancer. Medulloblastoma and glioblastoma multiforme
     are the most common malignant brain tumours in children and adults,
     respectively. In glioblastoma multiforme, the most aggressive form, 80%
     of the tumours show loss of 10q. We have used representational difference
     analysis to identify a homozygous deletion at 10q25.3-26.1 in a
     medulloblastoma cell line and have cloned a novel gene, ***DMBT1*** ,
     spanning this deletion.   ***DMBT1***   shows homology to the scavenger
     receptor cysteine-rich (SRCR) superfamily. Intragenic homozygous
     deletions have been detected in 2/20 medulloblastomas and in 9/39
     glioblastomas multiformes. Lack of   ***DMBT1***   expression has been
     demonstrated in 4/5 brain-tumour cell lines. We suggest that
        DMBT1   is a putative tumour-suppressor gene implicated in the
     carcinogenesis of medulloblastoma and glioblastoma multiforme.

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=> e bikker floris/au
E1          6      BIKKER F/AU
E2         21      BIKKER F J/AU
E3         26 -->  BIKKER FLORIS/AU
E4         36      BIKKER FLORIS J/AU
E5         10      BIKKER G/AU
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E6          98      BIKKER H/AU
E7           1      BIKKER H DR/AU
E8           1      BIKKER HEINE/AU
E9           2      BIKKER HENNI/AU
E10         37      BIKKER HENNIE/AU
E11          2      BIKKER HENNIE DR/AU
E12          3      BIKKER IDO G/AU

=> s e1-e4 and dmbt?
L17         63  ("BIKKER F"/AU OR "BIKKER F J"/AU OR "BIKKER FLORIS"/AU OR "BIKK
                ER FLORIS J"/AU) AND DMBT?

=> dup rem l17
PROCESSING COMPLETED FOR L17
L18         15 DUP REM L17 (48 DUPLICATES REMOVED)

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 15 ANSWERS - CONTINUE? Y/(N):y

L18   ANSWER 1 OF 15   CAPLUS   COPYRIGHT 2009 ACS on STN DUPLICATE 1
AN    2009:402136   CAPLUS <<LOGINID::20090423>>
DN    150:327861
TI    ***DMBT1***   functions as pattern-recognition molecule for
      poly-sulfated and poly-phosphorylated ligands
AU    End, Caroline;   ***Bikker, Floris***  ; Renner, Marcus; Bergmann, Gaby;
      Lyer, Stefan; Blaich, Stephanie; Hudler, Melanie; Helmke, Burkhard;
      Gassler, Nikolaus; Autschbach, Frank; Ligtenberg, Antoon J. M.; Benner,
      Axel; Holmskov, Uffe; Schirmacher, Peter; Nieuw Amerongen, Arie V.;
      Rosenstiel, Philip; Sina, Christian; Franke, Andre; Hafner, Mathias;
      Kioschis, Petra; Schreiber, Stefan; Poustka, Annemarie; Mollenhauer, Jan
CS    Division of Molecular Genome Analysis, German Cancer Research Center,
      Heidelberg, Germany
SO    European Journal of Immunology (2009), 39(3), 833-842
      CODEN: EJIMAF; ISSN: 0014-2980
PB    Wiley-VCH Verlag GmbH & Co. KGaA
DT    Journal
LA    English
AB    Deleted in malignant brain tumors 1 (  ***DMBT1***  ) is a secreted
      glycoprotein displaying a broad bacterial-binding spectrum.  Recent
      functional and genetic studies linked  ***DMBT1***   to the suppression
      of LPS-induced TLR4-mediated NF-.kappa.B activation and to the
      pathogenesis of Crohn's disease.  Here, the authors aimed at unraveling
      the mol. basis of its function in mucosal protection and of its broad
      pathogen-binding specificity.  The authors report that  ***DMBT1***
      directly interacts with dextran sulfate sodium (DSS) and carrageenan, a
      structurally similar sulfated polysaccharide, which is used as a
      texturizer and thickener in human dietary products.  However, binding of
       ***DMBT1***   does not reduce the cytotoxic effects of these agents to
      intestinal/epithelial cells in vitro.  DSS and carrageenan compete for
       ***DMBT1***  -mediated bacterial aggregation via interaction with its
      bacterial-recognition motif.  Competition and ELISA studies identify
      poly-sulfated and poly-phosphorylated structures as ligands for this
      recognition motif, such as heparan sulfate, LPS, and lipoteichoic acid.
      Dose-response studies in  ***Dmbt1***  -/- and  ***Dmbt1***  +/+ mice
      utilizing the DSS-induced colitis model demonstrate a differential
      response only to low but not to high DSS doses.  The authors propose that
       ***DMBT1***   functions as pattern-recognition mol. for poly-sulfated and
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poly-phosphorylated ligands providing a mol. basis for its broad
bacterial-binding specificity and its inhibitory effects on LPS-induced
TLR4-mediated NF-.kappa.B activation.

L18   ANSWER 2 OF 15   BIOSIS   COPYRIGHT (c) 2009 The Thomson Corporation   on STN
      DUPLICATE 2
AN   2008:112593 BIOSIS <<LOGINID::20090423>>
DN   PREV200800114726
TI   ***DMBT1***   confers mucosal protection in vivo and a deletion variant
      is associated with Crohn's disease.
AU   Renner, Marcus; Bergmann, Gaby; Krebs, Inge; End, Caroline; Lyer, Stefan;
      Hilberg, Frank; Helmke, Burkhard; Gassler, Nikolaus; Autschbach, Frank;
      Bikker, Floris ; Strobel-Freidekind, Olga; Gronert-Sum, Sabine;
      Benner, Axel; Blaich, Stephanie; Wittig, Rainer; Hudler, Melanie;
      Ligtenberg, Antoon J.; Madsen, Jens; Holmskov, Uffe; Annese, Vito;
      Latiano, Anna; Schirmacher, Peter; Amerongen, Arie V. Nieuw; D'Amato,
      Mauro; Kioschis, Petra; Hafner, Mathias; Poustka, Annemarie; Mollenhauer,
      Jan [Reprint Author]
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, Neuenheimer Feld 280,
      D-69120 Heidelberg, Germany
      j.mollenhauer@dkfz.de
SO   Gastroenterology, (NOV 2007) Vol. 133, No. 5, pp. 1499-1509.
      CODEN: GASTAB. ISSN: 0016-5085.
DT   Article
LA   English
ED   Entered STN: 13 Feb 2008
      Last Updated on STN: 13 Feb 2008
AB   Background & Aims: Impaired mucosal. defense plays an important role in
      the pathogenesis of Crohn's disease (CD), one of the main subtypes of
      inflammatory bowel disease (IBD). Deleted in malignant brain tumors 1(
      DMBT1) is a secreted scavenger receptor cysteine-rich protein
with
      predominant expression in. the intestine and has been proposed to exert
      possible functions in regenerative processes and pathogen defense. Here,
      we aimed at analyzing the role of   ***DMBT1***   in IBD. Methods: We
      studied   ***DMBT1***   expression in IBD and normal tissues by
      quantitative reverse transcription-polymerase chain reaction,
      immunohistochemistry, and mRNA in situ hybridization. Genetic
      polymorphisms within   ***DMBT1***   were analyzed in an Italian IBD
      case-control sample.   ***Dmbt1***   (-/-) mice were generated,
      characterized, and analyzed for their susceptibility to dextran sulfate
      sodium-induced colitis. Results: ***DMBT1***   levels correlate with
      disease activity in inflamed IBD tissues. A highly significant fraction
      of the patients with IBD displayed up-regulation of   ***DMBT1***
      specifically in the intestinal epithelial surface cells and Paneth cells.
      A deletion allele of   ***DMBT1***   with a reduced: number of scavenger
      receptor cysteine-rich domain coding exons is associated with an increased
      risk of CD (P =.00056; odds ratio, 1.75) but not for ulcerative colitis.
      Dmbt1   (-/-) mice display enhanced susceptibility to dextran
sulfate
      sodium-induced colitis and elevated Tnf, Il6, and Nod2 expression levels
      during inflammation. Conclusions: ***DMBT1***   may play a role in
      intestinal mucosal protection and prevention of inflammation. Impaired
      DMBT1   function may contribute to the pathogenesis of CD.

L18   ANSWER 3 OF 15   CAPLUS   COPYRIGHT 2009 ACS on STN
AN   2005:953991 CAPLUS <<LOGINID::20090423>>

```
DN    143:260332
TI    Use of   ***DMBT1***   protein for capturing sulfate and phosphate groups
      exposed in disease-associated agents
IN    Mollenhauer, Jan; End, Caroline; Blaich, Stephanie; Bergmann, Gaby;
      Renner, Marcus; Lyer, Stefan; Wittig, Rainer; Poustka, Annemarie;
         ***Bikker, Floris***  ; Ligtenberg, Anton; Nieuw-Amerongen, Arie;
Veerman,
      Enno
PA    Deutsches Krebsforschungszentrum Stiftung des Oeffentlichen Rechts,
      Germany
SO    Eur. Pat. Appl., 57 pp.
      CODEN: EPXXDW
DT    Patent
LA    English
FAN.CNT 1
      PATENT NO.            KIND   DATE        APPLICATION NO.        DATE
      ---------------       ----   --------    --------------------   --------
PI    EP 1568374            A1     20050831    EP 2004-4281           20040225
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
      WO 2005079834         A1     20050901    WO 2005-EP1994         20050225
      WO 2005079834         A9     20051027
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
             RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
             MR, NE, SN, TD, TG
      EP 1727558            A1     20061206    EP 2005-732131         20050225
         R:  AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
      US 20080234185        A1     20080925    US 2006-590657         20060825
PRAI  EP 2004-4281          A      20040225
      WO 2005-EP1994        W      20050225
AB    Disclosed is the use of   ***DMBT1***   , or of the nucleic acid encoding
      it, for the manuf. of a medicament for the treatment of a patient
      suffering from a disease caused by an agent which possesses at least one
      accessible sulfate and/or at least one accessible phosphate group.
        ***DMBT1***   may also be used as a diagnostic for diagnosing the
      susceptibility of an individual to sulfate or phosphate groups, as well in
      methods for diagnosis, prophylaxis or treatment of diseases caused by an
      agent which possesses at least one accessible sulfate and/or at least one
      accessible phosphate group.  The invention is based on the discovery that
      human protein   ***DMBT1***   (Deleted in Malignant Brain Tumors 1) is a
      dual-specific pattern recognition receptor for non-self (bacterial cell
      wall components, gp120 of HIV, damage-, inflammation-, and cancer-causing
      sulfated carbohydrates) and self structures (DNA, phospholipids, cell
      surface and extracellular matrix carbohydrates), which interacts with
      accessible sulfate and or phosphate groups, which are present on numerous
      compds., compns., and organisms.  Pattern recognition of   ***DMBT1***
      is mediated via an 11-amino acid motif (GRVEVLYRGSW) that binds sulfate
      and phosphate groups.  By acting as a dual-specific PRR,   ***DMBT1***
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may exert a general insulator function against a broad range of pathogens,
which predicts a contribution of   ***DMBT1***   germline deletions to
human susceptibility to infection, inflammation, and cancer. Furthermore,
a 40% decreased level of   ***DMBT1***   in male mice correlates with an
increased susceptibility and with a deficient protection against dextran
sulfate sodium-induced tissue damage and inflammation in the colon.
RE.CNT 7   THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18   ANSWER 4 OF 15 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 3
AN   2005:69186 BIOSIS <<LOGINID::20090423>>
DN   PREV200500070157
TI   Bacteria binding by   ***DMBT1***   /SAG/gp-340 is confined to the
      VEVLXXXXW motif in its scavenger receptor cysteine-rich domains.
AU   ***Bikker, Floris J.***   ; Ligtenberg, Antoon J. M. [Reprint Author];
      End, Caroline; Renner, Marcus; Blaich, Stephanie; Lyer, Stefan; Wittig,
      Rainer; van't Hof, Wim; Veerman, Enno C. I.; Nazmi, Kamran; De
      Blieck-Hogervorst, Jolanda M. A.; Kioschis, Petra; Amerongen, Arie V.
      Nieuw; Poustka, Annemarie; Mollenhauer, Jan
CS   Acad Ctr Dent AmsterdamDept Oral Biochem, Free Univ Amsterdam,
      Boechorststr 7, NL-1081 BT, Amsterdam, Netherlands
      ajm.ligtenberg@vumc.nl
SO   Journal of Biological Chemistry, (November 12 2004) Vol. 279, No. 46, pp.
      47699-47703. print.
      CODEN: JBCHA3. ISSN: 0021-9258.
DT   Article
LA   English
ED   Entered STN: 16 Feb 2005
      Last Updated on STN: 16 Feb 2005
AB   The scavenger receptor cysteine-rich (SRCR) proteins form an archaic group
      of metazoan proteins characterized by the presence of SRCR domains. These
      proteins are classified in group A and B based on the number of conserved
      cysteine residues in their SRCR domains, i.e. six for group A and eight
      for group B. The protein   ***DMBT1***   (deleted in malignant brain
      tumors 1), which is identical to salivary agglutinin and lung gp-340,
      belongs to the group B SRCR proteins and is considered to be involved in
      tumor suppression and host defense by pathogen binding. In a previous
      study we used non-overlapping synthetic peptides covering the SRCR
      consensus sequence to identify a 16-amino acid bacteria-binding protein
      loop (peptide SRCRP2; QGRVEVLYRGSWGTVC) within the SRCR domains. In this
      study, using overlapping peptides, we pinpointed the minimal
      bacteria-binding site on SRCRP2, and thus   ***DMBT1***   , to an 11-amino
      acid motif (***DMBT1***   pathogen-binding site 1 or   ***DMBT1pbs1***
      ; GRVEVLYRGSW). An alanine substitution scan revealed that VEVL and Trp
      are critical residues in this motif. Bacteria binding by
        DMBT1pbs1   was different from the bacteria binding by the
      macrophage receptor MARCO in which an RXR motif was critical. In
      addition, the homologous consensus sequences of a number of SRCR proteins
      were synthesized and tested for bacteria binding. Only consensus
      sequences of   ***DMBT1***   orthologues bound bacteria by this motif.

L18   ANSWER 5 OF 15   MEDLINE on STN
AN   2004474758   MEDLINE <<LOGINID::20090423>>
DN   PubMed ID: 15385529
TI   A peptide domain of bovine milk lactoferrin inhibits the interaction
      between streptococcal surface protein antigen and a salivary agglutinin

peptide domain.

AU   Oho Takahiko;   ***Bikker Floris J*** ; Nieuw Amerongen Arie V; Groenink
     Jasper
CS   Department of Preventive Dentistry, Kyushu University Faculty of Dental
     Sciences, Fukuoka, Japan.. oho@denta.hal.kagoshima-u.ac.jp
AB   The peptide domain of salivary agglutinin responsible for its interaction
     with cell surface protein antigen (PAc) of Streptococcus mutans or bovine
     lactoferrin was found in the same peptide, scavenger receptor
     cysteine-rich domain peptide 2 (SRCRP2). Inhibition studies suggest that
     PAc and lactoferrin, of which residues 480 to 492 seem important,
     competitively bind to the SRCRP2 domain of salivary agglutinin.

L18 ANSWER 6 OF 15 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
     DUPLICATE 4
AN   2005:133815 BIOSIS <<LOGINID::20090423>>
DN   PREV200500138844
TI   Salivary agglutinin/ ***DMBT1SAG***   expression is up-regulated in the
     presence of salivary gland tumors.
AU   ***Bikker, F. J.*** ; van der Wal, J. E.; Ligtenberg, A. J. M. [Reprint
     Author]; Mollenhauer, J.; de Blieck-Hogervorst, J. M. A.; van der Waal,
     I.; Poustka, A.; Amerongen, A. V. Nieuw
CS   Dept Dent Basic Sci, Acad Ctr Dent Amsterdam, Van der Boechorststr 7,
     NL-1081 BT, Amsterdam, Netherlands
     ajm.ligtenberg@vumc.nl
AB   Salivary agglutinin (SAG) is encoded by the gene Deleted in Malignant
     Brain Tumors 1 (***DMBT1***) and represents the salivary variant of
      DMBT1   (***DMBT1SAG***   ). While SAG is a bona fide anti-
caries
     factor, ***DMBT1***   was proposed as a candidate tumor-suppressor for
     brain, digestive tract, and lung cancer. Though ***DMBT1SAG***   is
     expressed in the salivary glands, its expression in salivary gland tumors
     is unknown. Here we analyzed ***DMBT1SAG***   expression in 20 salivary
     gland tumors and 14 tumor-flanking tissues by immunohistochemistry.
      DMBT1SAG   in salivary gland tumors resembles the changes of
     expression levels known from ***DMBT1***   in tumors in other cancer
     types. Particularly, ***DMBT1SAG***   was up-regulated in 10/14
     tumor-flanking tissues, and a strong staining of the luminal content in
     the tumor and/or the tumor-flanking tissue was observed in 14/20 cases.
     This suggests that, in addition to its role in caries defense, SAG may

serve as a potential tumor indicator and/or tumor suppressor in salivary
gland tissue.

AN   2004:130519 BIOSIS <<LOGINID::20090423>>
DN   PREV200400116079
TI   Carcinogen inducibility in vivo and down-regulation of   ***DMBT1***
       during breast carcinogenesis.
AU   Mollenhauer, Jan [Reprint Author]; Helmke, Burkhard; Medina, Daniel;
       Bergmann, Gaby; Gassler, Nikolaus; Mueller, Hanna; Lyer, Stefan;
       Diedrichs, Laura; Renner, Marcus; Wittig, Rainer; Blaich, Stephanie;
       Hamann, Ute; Madsen, Jens; Holmskov, Uffe;   ***Bikker, Floris*** ;
       Ligtenberg, Antoon; Carlen, Anette; Olsson, Jan; Otto, Herwart F.;
       O'Malley, Bert; Poustka, Annemarie
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
       Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
       j.mollenhauer@dkfz-heidelberg.de; j.mollenhauer@dkfz-heidelberg.de
SO   Genes Chromosomes & Cancer, (March 2004) Vol. 39, No. 3, pp. 185-194.
       print.
       CODEN: GCCAES. ISSN: 1045-2257.
DT   Article
LA   English
ED   Entered STN: 3 Mar 2004
       Last Updated on STN: 3 Mar 2004
AB   Deleted in malignant brain tumors 1 (***DMBT1***) has been proposed as
       a candidate tumor suppressor for brain and epithelial cancer. Initial
       studies suggested loss of expression rather than mutation as the
       predominant mode of   ***DMBT1***   inactivation. However, in situ
       studies in lung cancer demonstrated highly sophisticated changes of
        DMBT1   expression and localization, pointing to a chronological
       order of events. Here we report on the investigation of   ***DMBT1***
       in breast cancer in order to test whether these principles might also be
       attributable to other tumor types. Comprehensive mutational analyses did
       not uncover unambiguous inactivating   ***DMBT1***   mutations in breast
       cancer. Expression analyses in the human and mouse mammary glands pointed
       to the necessity of   ***DMBT1***   induction. While age-dependent and
       hormonal effects could be ruled out, 9 of 10 mice showed induction of
        Dmbt1   expression after administration of the carcinogen
       7,12-dimethybenz(alpha)anthracene prior to the onset of tumorigenesis or
       other histopathological changes.   ***DMBT1***   displayed significant
       up-regulation in human tumor-flanking tissues compared to in normal breast
       tissues (P < 0.05). However, the breast tumor cells displayed a switch
       from lumenal secretion to secretion to the extracellular matrix and a
       significant down-regulation compared to that in matched normal flanking
       tissues (P < 0.01). We concluded that loss of expression also is the
       predominant mode of   ***DMBT1***   inactivation in breast cancer. The
       dynamic behavior of   ***DMBT1***   in lung carcinoma is fully reflected
       in breast cancer, which suggests that this behavior might be common to
       tumor types arising from monolayered epithelia.

AN   2005:35700 BIOSIS <<LOGINID::20090423>>
DN   PREV200500033927
TI   Binding of salivary agglutinin to IgA.
AU   Ligtenberg, Antoon J. M. [Reprint Author];   ***Bikker, Floris J.*** ; De

Blieck-Hogervorst, Jolanda M. A.; Veerman, Enno C. I.; Amerongen, Arie V.
Nieuw
CS   Fac MedDept Dent Basic SciSect Oral Biochem,Acad Ctr Dent, Free Univ
Amsterdam, Boechorststr 7, NL-1081 BT, Amsterdam, Netherlands
ajm.ligtenberg@vumc.nl
SO   Biochemical Journal, (October 1 2004) Vol. 383, No. Part 1, pp. 159-164.
print.
ISSN: 0264-6021.
DT   Article
LA   English
ED   Entered STN: 19 Jan 2005
Last Updated on STN: 19 Jan 2005

AB   SAG (salivary agglutinin), which is identical to gp-340 (glycoprotein-340)
from the lung, is encoded by ***DMBTI*** (deleted in malignant brain
tumours 1). It is a member of the SRCR (scavenger receptor cysteine-rich)
superfamily and contains 14 SRCR domains, 13 of which are highly similar.
SAG in saliva is partially complexed with IgA, which may be necessary for
bacterial binding. The goal of the present study was to characterize the
binding of purified SAG to IgA. SAG binds to a variety of proteins,
including serum and secretory IgA, alkaline phosphatase-conjugated IgGs
originating from rabbit, goat, swine and mouse, and lactoferrin and
albumin. Binding of IgA to SAG is calcium dependent and is inhibited by
0.5 M KCI, suggesting that electrostatic interactions are involved.
Binding of IgA was destroyed after reduction of SAG, suggesting that the
protein moiety is involved in binding. To pinpoint further the binding
domain for IgA on SAG, a number of consensus-based peptides of the SRCR
domains and SRCR interspersed domains were designed and synthesized.
ELISA binding studies with IgA indicated that only one of the peptides
tested, comprising amino acids 18-33 (QGRVEVLYRGSWGTVC) of the
109-amino-acid SRCR domain, exhibited binding to IgA. This domain is
identical to the domain of SAG that is involved in binding to bacteria.
Despite this similar binding site, IgA did not inhibit binding of
Streptococcus mutans to SAG or peptide. These results show that the
binding of IgA to SAG is specifically mediated by a peptide sequence on
the SRCR domains.

L18   ANSWER 9 OF 15 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
DUPLICATE 7
AN   2003:247369 BIOSIS <<LOGINID::20090423>>
DN   PREV200300247369
TI   Frequent downregulation of ***DMBT1*** and galectin-3 in epithelial
skin cancer.
AU   Mollenhauer, Jan [Reprint Author]; Deichmann, Martin; Helmke, Burkhard;
Mueller, Hanna; Kollender, Gaby; Holmskov, Uffe; Ligtenberg, Toon; Krebs,
Inge; Wiemann, Stefan; Bantel-Schaal, Ursula; Madsen, Jens; ***Bikker,***
***   Floris*** ; Klauck, Sabine M.; Otto, Herwart F.; Moldenhauer, Gerd;
Poustka, Annemarie
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
j.mollenhauer@dkfz.de
SO   International Journal of Cancer, (10 June 2003) Vol. 105, No. 2, pp.
149-157. print.
CODEN: IJCNAW. ISSN: 0020-7136.
DT   Article
LA   English
ED   Entered STN: 21 May 2003
Last Updated on STN: 21 May 2003

AB   ***DMBT1***   and galectin-3 are potential interacting proteins with
      presumably complex roles in tumorigenesis. While at present a variety of
      mechanisms are discussed for   ***DMBT1***   and its participation in
      cancer, galectin-3 is commonly known to exert tumor-promoting effects.
      However, in vitro studies in a rodent system have suggested that
      DMBT1 /galectin-3 interaction in the ECM triggers epithelial
      differentiation, which would point to tumor-suppressive properties. To
      improve the understanding of   ***DMBT1*** /galectin-3 action in cancer,
      we carried out studies in skin cancer of different origins. Mutational
      analyses of   ***DMBT1***   identified a missense mutation in 1 of 13
      melanoma cell lines. It led to an exchange of an evolutionary conserved
      proline residue for serine and located within the second CUB domain of
      DMBT1 . Immunohistochemical analyses demonstrated absence of
      DMBT1 /galectin-3 expression from melanocytes but induction of
      DMBT1   expression in 1 of 8 nevi and 1 of 11 melanomas and of
      galectin-3 expression in 3 of 8 nevi and 4 of 8 melanomas. These data
      suggest that   ***DMBT1***   and galectin-3 are unlikely to act as
      classical tumor suppressors in melanomas.   ***DMBT1***   and galectin-3
      appear to be secreted to the ECM by epithelial cells within the epidermis
      and the hair follicle. Compared to the flanking normal epidermis, skin
      tumors of epithelial origin frequently displayed downregulation of
      DMBT1   (18 of 19 cases) and galectin-3 (12 of 12 cases). Thus,
      loss of   ***DMBT1*** /galectin-3 expression may play a role in the
      genesis of epithelial skin cancer. This would support the view that
      galectin-3 can exert tumor-suppressive effects in certain scenarios, and
      DMBT1 /galectin-3-mediated differentiation represents a candidate
      mechanism for this effect.

L18   ANSWER 10 OF 15 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN
AN   2003:584033 BIOSIS <<LOGINID::20090423>>
DN   PREV200300583256
TI   The potential functional dualism of   ***DMBT1*** : Epithelial
      differentiation and pathogen-binding.
AU   Mollenhauer, Jan [Reprint Author];   ***Bikker, Floris*** ; Helmke,
      Burkhard; Kollender, Gaby [Reprint Author]; Lyer, Stefan [Reprint Author];
      Renner, Marcus [Reprint Author]; Ligtenberg, Antoon; Madsen, Jens;
      Holmskov, Uffe; Otto, Herwart F.; Poustka, Annemarie [Reprint Author]
CS   Department for Molecular Genome Analysis, Deutsches
      Krebsforschungszentrum, Heidelberg, Germany
SO   International Journal of Molecular Medicine, (2003) Vol. 12, No.
      Supplement 1, pp. S9. print.
      Meeting Info.: 8th World Congress on Advances in Oncology and 6th
      International Symposium on Molecular Medicine. Crete, Greece. October
      16-18, 2003.
      ISSN: 1107-3756 (ISSN print).
DT   Conference; (Meeting)
      Conference; Abstract; (Meeting Abstract)
LA   English
ED   Entered STN: 10 Dec 2003
      Last Updated on STN: 10 Dec 2003

L18   ANSWER 11 OF 15 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 8
AN   2002:535766 BIOSIS <<LOGINID::20090423>>
DN   PREV200200535766
TI   Identification of the bacteria-binding peptide domain on salivary

agglutinin (gp-340/ ***DMBT1***), a member of the scavenger receptor
cysteine-rich superfamily.

AU ***Bikker, Floris J.*** [Reprint author]; Ligtenberg, Antoon J. M.;
Nazmi, Kamran; Veerman, Enno C. I.; van't Hof, Wim; Bolscher, Jan G. M.;
Poustka, Annemarie; Amerongen, Arie V. Nieuw; Mollenhauer, Jan
CS Van der Boechorststraat 7, 1081 BT, Amsterdam, Netherlands
fj.bikker.obc.acta@med.vu.nl
SO Journal of Biological Chemistry, (August 30, 2002) Vol. 277, No. 35, pp.
32109-32115. print.
CODEN: JBCHA3. ISSN: 0021-9258.
DT Article
LA English
ED Entered STN: 16 Oct 2002
Last Updated on STN: 16 Oct 2002
AB Salivary agglutinin is encoded by ***DMBT1*** and identical to gp-340,
a member of the scavenger receptor cysteine-rich (SRCR) superfamily.
Salivary agglutinin/DAMBT1 is known for its Streptococcus mutans
agglutinating properties. This 300-400 kDa glycoprotein is composed of
conserved peptide motifs: 14 SRCR domains that are separated by
SRCR-interspersed domains (SIDs), 2 CUB (C1r/C1s Uegf Bmp1) domains, and a
zona pellucida domain. We have searched for the peptide domains of
agglutinin/ ***DMBT1*** responsible for bacteria binding. Digestion
with endoproteinase Lys-C resulted in a protein fragment containing
exclusively SRCR and SID domains that binds to S. mutans. To define more
closely the S. mutans-binding domain, consensus-based peptides of the SRCR
domains and SIDs were designed and synthesized. Only one of the SRCR
peptides, designated SRCRP2, and none of the SID peptides bound to S.
mutans. Strikingly, this peptide was also able to induce agglutination of
S. mutans and a number of other bacteria. The repeated presence of this
peptide in the native molecule endows agglutinin/ ***DMBT1*** with a
general bacterial binding feature with a multivalent character. Moreover,
our studies demonstrate for the first time that the polymorphic SRCR
domains of salivary agglutinin/ ***DMBT1*** mediate ligand
interactions.

L18 ANSWER 12 OF 15 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
STN   DUPLICATE 9
AN 2002:529538 BIOSIS <<LOGINID::20090423>>
DN PREV200200529538
TI The SRCR/SID region of ***DMBT1*** defines a complex multi-allele
system representing the major basis for its variability in cancer.
AU Mollenhauer, Jan [Reprint author]; Mueller, Hanna; Kollender, Gaby; Lyer,
Stefan; Diedrichs, Laura; Helmke, Burkhard; Holmskov, Uffe; Ligtenberg,
Toon; Herbertz, Stephan; Krebs, Inge; Madsen, Jens; ***Bikker, Floris***
; Schmitt, Liane; Wiemann, Stefan; Scheurlen, Wolfram; Otto, Herwart F.;
von Deimling, Andreas; Poustka, Annemarie
CS Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
j.mollenhauer@dkfz.de
SO Genes Chromosomes and Cancer, (November, 2002) Vol. 35, No. 3, pp.
242-255. print.
CODEN: GCCAES. ISSN: 1045-2257.
DT Article
LA English
ED Entered STN: 16 Oct 2002
Last Updated on STN: 16 Oct 2002
AB Deleted in malignant brain tumors 1 (***DMBT1***) at 10q25.3-q26.1 has

been proposed as a candidate tumor-suppressor gene for brain and
epithelial cancer.   ***DMBT1***   encodes a multifunctional mucin-like
protein presumably involved in epithelial differentiation and protection.
The gene consists of highly homologous and repeating exon and intron
sequences. This specifically applies to the region coding for the
repetitive scavenger receptor cysteine-rich (SRCR) domains and
SRCR-interspersed domains (SIDs) that constitutes the major part of the
gene. This particular structure may previously have interfered with the
delineation of   ***DMBT1***   alterations in cancer. Uncovering these,
however, is of mechanistic importance. By a combined approach, we
conducted a detailed mutational analysis, starting from a panel of 51
tumors, including 46 tumor cell lines and five primary tumors.
Alterations in the repetitive region were present in 22/31 (71%) tumors
that were investigated in detail. Six tumors showed presumably de novo
mutations, among these three with point mutations in combination with a
loss of heterozygosity. However, none of the alterations unambiguously
would be predicted to lead to an inactivation of   ***DMBT1***   . We
define seven distinct   ***DMBT1***   alleles based on variable numbers of
tandem repeats (VNTRs). At least 11 tumors exclusively harbored these
VNTRs. The data suggest that the SRCR/SID region defines a complex
multi-allele system that has escaped previous analyses and that represents
the major basis for the variability of   ***DMBT1***   in cancer.
   DMBT1   thus compares to mucins rather than to conventional tumor
suppressors.

L18   ANSWER 13 OF 15 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 10
AN   2002:471853 BIOSIS <<LOGINID::20090423>>
DN   PREV200200471853
TI   Sequential changes of the   ***DMBT1***   expression and location in
      normal lung tissue and lung carcinomas.
AU   Mollenhauer, Jan [Reprint author]; Helmke, Burkhard; Mueller, Hanna;
      Kollender, Gaby; Lyer, Stefan; Diedrichs, Laura; Holmskov, Uffe;
      Ligtenberg, Toon; Herbertz, Stephan; Krebs, Inge; Wiemann, Stefan; Madsen,
      Jens;   ***Bikker, Floris***   ; Schmitt, Liane; Otto, Herwart F.; Poustka,
      Annemarie
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
      Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
      j.mollenhauer@dkfz.de
SO   Genes Chromosomes and Cancer, (October, 2002) Vol. 35, No. 2, pp. 164-169.
      print.
      CODEN: GCCAES. ISSN: 1045-2257.
DT   Article
LA   English
ED   Entered STN: 11 Sep 2002
      Last Updated on STN: 11 Sep 2002
AB   Deleted in Malignant Brain Tumors 1 (***DMBT1***   ) at chromosome region
      10q25.3-q26.1 has been proposed as a candidate tumor-suppressor gene for
      brain, digestive tract, and lung cancer. Recent studies on its expression
      in lung cancer have led to divergent results and have raised a
      controversial discussion. Moreover,   ***DMBT1***   has been implicated
      with epithelial protection in the respiratory tract. We thus wondered how
      a loss of its expression could be related to carcinogenesis in the lung.
      To address these issues, we investigated the   ***DMBT1***   expression
      and location in the normal lung and lung cancer. By reverse-transcription
      PCR, a down-regulation of the   ***DMBT1***   expression in lung cancer
      cell lines is commonly detected. Immunohistochemical studies in situ

demonstrate that there are also low steady-state levels of   ***DMBT1***
in the normal respiratory epithelium. However, an up-regulation takes
place in the tumor-flanking epithelium and upon respiratory inflammation.
Lung carcinomas show increased   ***DMBT1***   expression compared to that
of undiseased lung tissue, but decreased   ***DMBT1***   levels compared
to that of tumor-flanking and inflammatory tissue. A switch from a
lumenal secretion to a secretion to the extracellular matrix takes place
during lung carcinogenesis. Our data may resolve the controversial
discussion on its expression in lung carcinomas. We hypothesize that the
changes of the   ***DMBT1***   expression and location do reflect a time
course that may point to possible mechanisms for its role in epithelial
cancer.

L18 ANSWER 14 OF 15 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
     STN   DUPLICATE 11
AN   2003:272621 BIOSIS <<LOGINID::20090423>>
DN   PREV200300272621
TI   Immunohistochemical detection of salivary agglutinin/gp-340 in human
     parotid, submandibular, and labial salivary glands.
AU   ***Bikker, F. J.***   [Reprint Author]; Ligtenberg, A. J. M.; van der
     Wal, J. E.; van den Keijbus, P. A. M.; Holmskov, U.; Veerman, E. C. I.;
     Amerongen, A. V. Nieuw
CS   Department of Dental Basic Sciences, Academic Centre for Dentistry
     Amsterdam (ACTA), Van der Boechorststraat 7, 1081 BT, Amsterdam,
     Netherlands
     fj.bikker.obc.acta@med.vu.nl
SO   Journal of Dental Research, (February 2002) Vol. 81, No. 2, pp. 134-139.
     print.
     CODEN: JDREAF. ISSN: 0022-0345.
DT   Article
LA   English
ED   Entered STN: 11 Jun 2003
     Last Updated on STN: 11 Jun 2003
AB   Salivary agglutinin is a Streptococcus mutans binding protein and a member
     of the scavenger receptor cysteine-rich superfamily. It is identical to
     lung gp-340 and brain   ***DMBT1*** , which possibly play a role in
     innate immunity and tumor suppression, respectively. The goal of this
     study was to localize salivary agglutinin in human salivary glands. Two
     monoclonal antibodies, directed against gp-340, were characterized. mAb
     213-1 reacted with sialic acid epitopes and cross-reacted with MUC7. The
     reaction with mAb 213-6 disappeared after reduction, suggesting that a
     protein epitope was recognized. In the parotid gland, immunohistochemical
     labeling with mAb 213-6 was found in the duct cells. In the submandibular
     gland and labial gland, both serous acini and demilune cells were labeled.
     In the labial gland, labeling was found at the luminal side of the duct
     cells. Salivary agglutinin was distinctly localized in salivary glands,
     but in distinct glandular secretions, no differences in electrophoretic
     behavior were observed.

L18 ANSWER 15 OF 15 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
     STN   DUPLICATE 12
AN   2001:514300 BIOSIS <<LOGINID::20090423>>
DN   PREV200100514300
TI   Human salivary agglutinin binds to lung surfactant protein-D and is
     identical with scavenger receptor protein gp-340.
AU   Ligtenberg, Toon J. M. [Reprint author];   ***Bikker, Floris J.*** ;
     Groenink, Jasper; Tornoe, Ida; Leth-Larsen, Rikke; Veerman, Enno C. I.;

        Nieuw Amerongen, Arie V.; Holmskov, Uffe
CS   Department of Basic Dental Sciences, Academic Centre for Dentistry
        Amsterdam (ACTA), van der Boechorststraat 7, 1081 BT, Amsterdam,
        Netherlands
        ajm.ligtenberg.obc.acta@med.vu.nl
AB   Salivary agglutinin is a 300-400 kDa salivary glycoprotein that binds to
        antigen B polypeptides of oral streptococci, thereby playing a role in
        their colonization and the development of caries. A mass spectrum was
        recorded of a trypsin digest of agglutinin. A dominant peak of 1460 Da
        was sequenced by quadrupole time-of-flight (Q-TOF) tandem MS. The
        sequence showed 100% identity with part of the scavenger receptor
        cysteine-rich ('SRCR') domain found in gp-340/ ***DMBT1***   (deleted in
        malignant brain tumours-1). The mass spectrum revealed 11 peaks with an
        identical mass as a computer-simulated trypsin digest of gp-340. gp-340 is
        a 340 kDa glycoprotein isolated from bronchoalveolar lavage fluid that
        binds specifically to lung surfactant protein-D.   ***DMBT1***   is a
        candidate tumour suppressor gene. A search in the human genome revealed
        only one copy of this gene. The molecular mass, as judged from SDS/PAGE
        and the amino acid composition of agglutinin, was found to be nearly
        identical with that of gp-340. It was shown by Western blotting that
        monoclonal antibodies against gp-340 reacted with salivary agglutinin, and
        monoclonals against agglutinin reacted with gp-340. It was demonstrated
        that gp-340 and agglutinin bound in a similar way to Streptococcus mutans
        and surfactant protein-D. Histochemically, the distribution of gp-340 in
        the submandibular salivary glands was identical with the agglutinin
        distribution, as shown in a previous paper (Takano, Bogert, Malamud, Lally
        and Hand (1991) Anat. Rec. 230, 307-318). We conclude that agglutinin is
        identical with gp-340, and that this molecule interacts with S. mutans and
        surfactant protein-D.

=> e ligtenberg antoon/au
E1   2   LIGTENBERG ALLART/AU
E2   1   LIGTENBERG ANTON/AU
E3   9 --> LIGTENBERG ANTOON/AU
E4   5   LIGTENBERG ANTOON J/AU
E5   45   LIGTENBERG ANTOON J M/AU
E6   6   LIGTENBERG AREND/AU
E7   1   LIGTENBERG CHRIS/AU
E8   2   LIGTENBERG CHRIS A/AU
E9   1   LIGTENBERG CHRISTIAAN/AU
E10   1   LIGTENBERG CHRISTINE/AU
E11   1   LIGTENBERG CHRISTNE/AU
E12   2   LIGTENBERG E A A M/AU

=> s e2-e5 and dmbt?
L19   38 ("LIGTENBERG ANTON"/AU OR "LIGTENBERG ANTOON"/AU OR "LIGTENBERG
                  ANTOON J"/AU OR "LIGTENBERG ANTOON J M"/AU) AND DMBT?

=> dup rem l19

PROCESSING COMPLETED FOR L19
L20   11 DUP REM L19 (27 DUPLICATES REMOVED)

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 11 ANSWERS - CONTINUE? Y/(N):y

L20   ANSWER 1 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 1
AN   2009:402136 CAPLUS <<LOGINID::20090423>>
DN   150:327861
TI   ***DMBT1***   functions as pattern-recognition molecule for
      poly-sulfated and poly-phosphorylated ligands
AU   End, Caroline; Bikker, Floris; Renner, Marcus; Bergmann, Gaby; Lyer,
      Stefan; Blaich, Stephanie; Hudler, Melanie; Helmke, Burkhard; Gassler,
      Nikolaus; Autschbach, Frank;   ***Ligtenberg, Antoon J. M.*** ; Benner,
      Axel; Holmskov, Uffe; Schirmacher, Peter; Nieuw Amerongen, Arie V.;
      Rosenstiel, Philip; Sina, Christian; Franke, Andre; Hafner, Mathias;
      Kioschis, Petra; Schreiber, Stefan; Poustka, Annemarie; Mollenhauer, Jan
CS   Division of Molecular Genome Analysis, German Cancer Research Center,
      Heidelberg, Germany
SO   European Journal of Immunology (2009), 39(3), 833-842
      CODEN: EJIMAF; ISSN: 0014-2980
PB   Wiley-VCH Verlag GmbH & Co. KGaA
DT   Journal
LA   English
AB   Deleted in malignant brain tumors 1 (***DMBT1***) is a secreted
      glycoprotein displaying a broad bacterial-binding spectrum. Recent
      functional and genetic studies linked   ***DMBT1***   to the suppression
      of LPS-induced TLR4-mediated NF-.kappa.B activation and to the
      pathogenesis of Crohn's disease. Here, the authors aimed at unraveling
      the mol. basis of its function in mucosal protection and of its broad
      pathogen-binding specificity. The authors report that   ***DMBT1***
      directly interacts with dextran sulfate sodium (DSS) and carrageenan, a
      structurally similar sulfated polysaccharide, which is used as a
      texturizer and thickener in human dietary products. However, binding of
       DMBT1   does not reduce the cytotoxic effects of these agents to
      intestinal/epithelial cells in vitro. DSS and carrageenan compete for
       DMBT1 -mediated bacterial aggregation via interaction with its
      bacterial-recognition motif. Competition and ELISA studies identify
      poly-sulfated and poly-phosphorylated structures as ligands for this
      recognition motif, such as heparan sulfate, LPS, and lipoteichoic acid.
      Dose-response studies in   ***Dmbt1*** -/- and   ***Dmbt1*** +/+ mice
      utilizing the DSS-induced colitis model demonstrate a differential
      response only to low but not to high DSS doses. The authors propose that
       DMBT1   functions as pattern-recognition mol. for poly-sulfated and
      poly-phosphorylated ligands providing a mol. basis for its broad
      bacterial-binding specificity and its inhibitory effects on LPS-induced
      TLR4-mediated NF-.kappa.B activation.

L20   ANSWER 2 OF 11 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 2
AN   2008:655889 BIOSIS <<LOGINID::20090423>>
DN   PREV200800655888
TI   A common binding motif for various bacteria of the bacteria-binding
      peptide SRCRP2 of   ***DMBT1*** /gp-340/salivary agglutinin.
AU   Leito, Jelani T. D. [Reprint Author];   ***Ligtenberg, Antoon J. M.*** ;
      Nazmi, Kamran; de Blieck-Hogervorst, Jolanda M. A.; Veerman, Enno C. I.;
      Amerongen, Arie V. Nieuw

CS   Vrije Univ, Acad Ctr Dent Amsterdam ACTA, Dept Oral Biochem, Boechorststr
      7, NL-1081 BT Amsterdam, Netherlands
      j.leito@vumc.nl
AB   Salivary agglutinin (***DMBT1*** (SAG)) is identical to lung
      glycoprotein-340 and encoded by the deleted in malignant brain tumors-1
      gene. It is a member of the scavenger receptor cysteine-rich (SRCR)
      superfamily, proteins that have one or more SRCR domains. Salivary
      agglutinin plays a role in oral innate immunity by the binding and
      agglutination of oral streptococci. Streptococcus mutans has been shown
      to bind to a 16-mer peptide (QGRVEV LYRGSWGTVC) located within the SRCR
      domains. Within this peptide, designated SRCR peptide 2, residues VEVL
      and Ware critical for binding. The aim of this study was to investigate
      binding of ***DMBT1*** (SAG) to other bacteria. Therefore, interaction
      between a series of bacteria and ***DMBT1*** (SAG), SRCR peptide 2 and
      its alanine substitution variants was investigated in adhesion and
      agglutination assays. For different bacteria there was a highly
      significant correlation between adhesion to ***DMBT1*** (SAG) and
      adhesion to SRCR peptide 2, suggesting that SRCR peptide 2 is the major
      bacteria-binding site. An alanine substitution scan showed that eight
      amino acids are involved in binding (xRVEVLYxxSWxxxx). The binding motifs
      varied for different species, but the residues VxVxY and W are always
      present. In conclusion, a common binding motif (RVEVLYxxxSW) within the
      SRCR domains is responsible for the broad bacteria-binding spectrum of
       DMBT1 (SAG).

L20   ANSWER 3 OF 11 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 3
AN   2008:112593 BIOSIS <<LOGINID::20090423>>
DN   PREV200800114726
TI   ***DMBT1***   confers mucosal protection in vivo and a deletion variant
      is associated with Crohn's disease.
AU   Renner, Marcus; Bergmann, Gaby; Krebs, Inge; End, Caroline; Lyer, Stefan;
      Hilberg, Frank; Helmke, Burkhard; Gassler, Nikolaus; Autschbach, Frank;
      Bikker, Floris; Strobel-Freidekind, Olga; Gronert-Sum, Sabine; Benner,
      Axel; Blaich, Stephanie; Wittig, Rainer; Hudler, Melanie;
Ligtenberg,
   ***   Antoon J.*** ; Madsen, Jens; Holmskov, Uffe; Annese, Vito; Latiano,
Anna;
      Schirmacher, Peter; Amerongen, Arie V. Nieuw; D'Amato, Mauro; Kioschis,
      Petra; Hafner, Mathias; Poustka, Annemarie; Mollenhauer, Jan [Reprint
      Author]
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, Neuenheimer Feld 280,
      D-69120 Heidelberg, Germany
      j.mollenhauer@dkfz.de
AB   Background & Aims: Impaired mucosal. defense plays an important role in

the pathogenesis of Crohn's disease (CD), one of the main subtypes of
inflammatory bowel disease (IBD). Deleted in malignant brain tumors 1(
DMBT1) is a secreted scavenger receptor cysteine-rich protein
with
predominant expression in. the intestine and has been proposed to exert
possible functions in regenerative processes and pathogen defense. Here,
we aimed at analyzing the role of ***DMBT1*** in IBD. Methods: We
studied ***DMBT1*** expression in IBD and normal tissues by
quantitative reverse transcription-polymerase chain reaction,
immunohistochemistry, and mRNA in situ hybridization. Genetic
polymorphisms within ***DMBT1*** were analyzed in an Italian IBD
case-control sample.   ***Dmbt1*** (-/-) mice were generated,
characterized, and analyzed for their susceptibility to dextran sulfate
sodium-induced colitis. Results: ***DMBT1*** levels correlate with
disease activity in inflamed IBD tissues. A highly significant fraction
of the patients with IBD displayed up-regulation of ***DMBT1***
specifically in the intestinal epithelial surface cells and Paneth cells.
A deletion allele of ***DMBT1*** with a reduced: number of scavenger
receptor cysteine-rich domain coding exons is associated with an increased
risk of CD (P =.00056; odds ratio, 1.75) but not for ulcerative colitis.
  Dmbt1 (-/-) mice display enhanced susceptibility to dextran
sulfate
sodium-induced colitis and elevated Tnf, Il6, and Nod2 expression levels
during inflammation. Conclusions: ***DMBT1*** may play a role in
intestinal mucosal protection and prevention of inflammation. Impaired
  DMBT1 function may contribute to the pathogenesis of CD.

L20   ANSWER 4 OF 11 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 4
AN   2008:70436 BIOSIS <<LOGINID::20090423>>
DN   PREV200800053239
TI   Salivary agglutinin/gilycoprotein-340/ ***DMBT1*** : a single molecule
      with variable composition and with different functions in infection,
      inflammation and cancer.
AU   ***Ligtenberg, Antoon J. M.***   [Reprint Author]; Veerman, Enno C. I.;
      Nieuw Amerongen, Arie V.; Mollenhauer, Jan
CS   Free Univ Amsterdam, Acad Ctr Dent, Dept Oral Biochem, Boechorststr 7,
      NL-1081 BT Amsterdam, Netherlands
      ajm.ligtenberg@vumc.nl
SO   Biological Chemistry, (DEC 2007) Vol. 388, No. 12, pp. 1275-1289.
      ISSN: 1431-6730.
DT   Article
      General Review; (Literature Review)
LA   English
ED   Entered STN: 9 Jan 2008
      Last Updated on STN: 9 Jan 2008
AB   Salivary agglutinin (SAG), lung glycoprotein-340 (gp-340) and Deleted in
      Malignant Brain Tumours 1 (***DMBT1***) are three names for identical
      proteins encoded by the ***dmbt1*** gene.   ***DMBT1*** /SAG/gp-340
      belongs to the scavenger receptor cysteine-rich (SRCR) superfamily of
      proteins, a superfamily of secreted or membrane-bound proteins with SRCR
      domains that are highly conserved down to sponges, the most ancient
      metazoa. On the one hand, ***DMBT1*** may represent an innate defence
      factor acting as a pattern recognition molecule. It interacts with a
      broad range of pathogens, including cariogenic streptococci and
      Helicobacter pylori, influenza viruses and HIV, but also with mucosal
      defence proteins, such as IgA, surfactant proteins and MUC5B. Stimulation

of alveolar macrophage migration, suppression of neutrophil oxidative
burst and activation of the complement cascade point further to an
important role in the regulation of inflammatory responses. On the other
hand, ***DMBT1*** has been demonstrated to play a role in epithelial
and stem cell differentiation. Inactivation of the gene coding for this
protein may lead to disturbed differentiation, possibly resulting in
tumour formation. These data strongly point to a role for ***DMBT1***
as a molecule linking innate immune processes with regenerative processes.

L20   ANSWER 5 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN
AN   2006:126926 CAPLUS <<LOGINID::20090423>>
DN   144:190476
TI   Salivary agglutinin and lung scavenger receptor cysteine-rich glycoprotein
      340 have broad anti-influenza activities and interactions with surfactant
      protein D that vary according to donor source and sialylation
AU   Hartshorn, Kevan L.;   ***Ligtenberg, Antoon*** ; White, Mitchell R.; van
      Eijk, Martin; Hartshorn, Max; Pemberton, Lily; Holmskov, Uffe; Crouch,
      Erika
CS   Department of Medicine, Section of Hematology/Oncology, Boston University
      School of Medicine, Boston, MA, 02118, USA
SO   Biochemical Journal (2006), 393(2), 545-553
      CODEN: BIJOAK; ISSN: 0264-6021
PB   Portland Press Ltd.
DT   Journal
LA   English
AB   The authors previously found that scavenger receptor cysteine-rich gp-340
      (glycoprotein-340), isolated from lung or saliva, directly inhibits human
      IAVs (influenza A viruses). The authors now show that salivary gp-340 has
      broad antiviral activity against human, equine and porcine IAV strains.
      Although lung and salivary gp-340 are identical in protein sequence,
      salivary gp-340 from one donor had significantly greater antiviral
      activity against avian-like IAV strains which preferentially bind sialic
      acids in .alpha.(2,3) linkage. A greater d. of .alpha.(2,3)-linked sialic
      acids was present on the salivary gp-340 from this donor as compared with
      salivary gp-340 from another donor or several prepns. of lung gp-340.
      Hence, the specificity of sialic acid linkages on gp-340 is an important
      determinant of anti-IAV activity. Gp-340 binds to SP-D (surfactant
      protein D), and the authors previously showed that lung gp-340 has
      co-operative interactions with SP-D in viral neutralization and
      aggregation assays. The authors now report that salivary gp-340 can, in
      some cases, strongly antagonize certain antiviral activities of SP-D.
      This effect was assocd. with greater binding of salivary gp-340 to the
      carbohydrate recognition domain of SP-D as compared with the binding of
      lung gp-340. These findings may relate to interindividual variations in
      innate defense against highly pathogenic IAV and to effects of aspiration
      of oral contents on SP-D-mediated lung functions.
RE.CNT 52   THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20   ANSWER 6 OF 11 CAPLUS COPYRIGHT 2009 ACS on STN
AN   2005:953991 CAPLUS <<LOGINID::20090423>>
DN   143:260332
TI   Use of ***DMBT1***   protein for capturing sulfate and phosphate groups
      exposed in disease-associated agents
IN   Mollenhauer, Jan; End, Caroline; Blaich, Stephanie; Bergmann, Gaby;
      Renner, Marcus; Lyer, Stefan; Wittig, Rainer; Poustka, Annemarie; Bikker,
      Floris;   ***Ligtenberg, Anton*** ; Nieuw-Amerongen, Arie; Veerman, Enno

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      PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
      ---------------     ----   --------    --------------------   --------
PI    EP 1568374          A1     20050831    EP 2004-4281           20040225
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
      WO 2005079834       A1     20050901    WO 2005-EP1994         20050225
      WO 2005079834       A9     20051027
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
        RW:  BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
             RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
             MR, NE, SN, TD, TG
      EP 1727558          A1     20061206    EP 2005-732131         20050225
         R:  AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
      US 20080234185      A1     20080925    US 2006-590657         20060825
PRAI  EP 2004-4281        A      20040225
      WO 2005-EP1994      W      20050225
```

AB   Disclosed is the use of ***DMBT1*** , or of the nucleic acid encoding
      it, for the manuf. of a medicament for the treatment of a patient
      suffering from a disease caused by an agent which possesses at least one
      accessible sulfate and/or at least one accessible phosphate group.
      DMBT1 may also be used as a diagnostic for diagnosing the
      susceptibility of an individual to sulfate or phosphate groups, as well in
      methods for diagnosis, prophylaxis or treatment of diseases caused by an
      agent which possesses at least one accessible sulfate and/or at least one
      accessible phosphate group. The invention is based on the discovery that
      human protein ***DMBT1*** (Deleted in Malignant Brain Tumors 1) is a
      dual-specific pattern recognition receptor for non-self (bacterial cell
      wall components, gp120 of HIV, damage-, inflammation-, and cancer-causing
      sulfated carbohydrates) and self structures (DNA, phospholipids, cell
      surface and extracellular matrix carbohydrates), which interacts with
      accessible sulfate and or phosphate groups, which are present on numerous
      compds., compns., and organisms. Pattern recognition of ***DMBT1***
      is mediated via an 11-amino acid motif (GRVEVLYRGSW) that binds sulfate
      and phosphate groups. By acting as a dual-specific PRR, ***DMBT1***
      may exert a general insulator function against a broad range of pathogens,
      which predicts a contribution of ***DMBT1*** germline deletions to
      human susceptibility to infection, inflammation, and cancer. Furthermore,
      a 40% decreased level of ***DMBT1*** in male mice correlates with an
      increased susceptibility and with a deficient protection against dextran
      sulfate sodium-induced tissue damage and inflammation in the colon.
RE.CNT 7   THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT

AN   2005:69186 BIOSIS <<LOGINID::20090423>>
DN   PREV200500070157
TI   Bacteria binding by ***DMBT1*** /SAG/gp-340 is confined to the
      VEVLXXXXW motif in its scavenger receptor cysteine-rich domains.
AU   Bikker, Floris J.; ***Ligtenberg, Antoon J. M.*** [Reprint Author];
      End, Caroline; Renner, Marcus; Blaich, Stephanie; Lyer, Stefan; Wittig,
      Rainer; van't Hof, Wim; Veerman, Enno C. I.; Nazmi, Kamran; De
      Blieck-Hogervorst, Jolanda M. A.; Kioschis, Petra; Amerongen, Arie V.
      Nieuw; Poustka, Annemarie; Mollenhauer, Jan
CS   Acad Ctr Dent AmsterdamDept Oral Biochem, Free Univ Amsterdam,
      Boechorststr 7, NL-1081 BT, Amsterdam, Netherlands
      ajm.ligtenberg@vumc.nl
SO   Journal of Biological Chemistry, (November 12 2004) Vol. 279, No. 46, pp.
      47699-47703. print.
      CODEN: JBCHA3. ISSN: 0021-9258.
DT   Article
LA   English
ED   Entered STN: 16 Feb 2005
      Last Updated on STN: 16 Feb 2005
AB   The scavenger receptor cysteine-rich (SRCR) proteins form an archaic group
      of metazoan proteins characterized by the presence of SRCR domains. These
      proteins are classified in group A and B based on the number of conserved
      cysteine residues in their SRCR domains, i.e. six for group A and eight
      for group B. The protein ***DMBT1*** (deleted in malignant brain
      tumors 1), which is identical to salivary agglutinin and lung gp-340,
      belongs to the group B SRCR proteins and is considered to be involved in
      tumor suppression and host defense by pathogen binding. In a previous
      study we used non-overlapping synthetic peptides covering the SRCR
      consensus sequence to identify a 16-amino acid bacteria-binding protein
      loop (peptide SRCRP2; QGRVEVLYRGSWGTVC) within the SRCR domains. In this
      study, using overlapping peptides, we pinpointed the minimal
      bacteria-binding site on SRCRP2, and thus ***DMBT1*** , to an 11-amino
      acid motif (***DMBT1*** pathogen-binding site 1 or ***DMBT1pbs1***
      ; GRVEVLYRGSW). An alanine substitution scan revealed that VEVL and Trp
      are critical residues in this motif. Bacteria binding by
        DMBT1pbs1 was different from the bacteria binding by the
      macrophage receptor MARCO in which an RXR motif was critical. In
      addition, the homologous consensus sequences of a number of SRCR proteins
      were synthesized and tested for bacteria binding. Only consensus
      sequences of ***DMBT1*** orthologues bound bacteria by this motif.

AN   2004:130519 BIOSIS <<LOGINID::20090423>>
DN   PREV200400116079
TI   Carcinogen inducibility in vivo and down-regulation of ***DMBT1***
      during breast carcinogenesis.
AU   Mollenhauer, Jan [Reprint Author]; Helmke, Burkhard; Medina, Daniel;
      Bergmann, Gaby; Gassler, Nikolaus; Mueller, Hanna; Lyer, Stefan;
      Diedrichs, Laura; Renner, Marcus; Wittig, Rainer; Blaich, Stephanie;
      Hamann, Ute; Madsen, Jens; Holmskov, Uffe; Bikker, Floris;
        Ligtenberg, Antoon ; Carlen, Anette; Olsson, Jan; Otto, Herwart
F.;
      O'Malley, Bert; Poustka, Annemarie

CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
      Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
      j.mollenhauer@dkfz-heidelberg.de; j.mollenhauer@dkfz-heidelberg.de
DT   Article
LA   English
ED   Entered STN: 3 Mar 2004
      Last Updated on STN: 3 Mar 2004
AB   Deleted in malignant brain tumors 1 (***DMBT1***) has been proposed as
      a candidate tumor suppressor for brain and epithelial cancer. Initial
      studies suggested loss of expression rather than mutation as the
      predominant mode of ***DMBT1*** inactivation. However, in situ
      studies in lung cancer demonstrated highly sophisticated changes of
       DMBT1 expression and localization, pointing to a chronological
      order of events. Here we report on the investigation of ***DMBT1***
      in breast cancer in order to test whether these principles might also be
      attributable to other tumor types. Comprehensive mutational analyses did
      not uncover unambiguous inactivating ***DMBT1*** mutations in breast
      cancer. Expression analyses in the human and mouse mammary glands pointed
      to the necessity of ***DMBT1*** induction. While age-dependent and
      hormonal effects could be ruled out, 9 of 10 mice showed induction of
       Dmbt1 expression after administration of the carcinogen
      7,12-dimethybenz(alpha)anthracene prior to the onset of tumorigenesis or
      other histopathological changes. ***DMBT1*** displayed significant
      up-regulation in human tumor-flanking tissues compared to in normal breast
      tissues (P < 0.05). However, the breast tumor cells displayed a switch
      from lumenal secretion to secretion to the extracellular matrix and a
      significant down-regulation compared to that in matched normal flanking
      tissues (P < 0.01). We concluded that loss of expression also is the
      predominant mode of ***DMBT1*** inactivation in breast cancer. The
      dynamic behavior of ***DMBT1*** in lung carcinoma is fully reflected
      in breast cancer, which suggests that this behavior might be common to
      tumor types arising from monolayered epithelia.

TI   Binding of salivary agglutinin to IgA.
AU   ***Ligtenberg, Antoon J. M.***   [Reprint Author]; Bikker, Floris J.; De
      Blieck-Hogervorst, Jolanda M. A.; Veerman, Enno C. I.; Amerongen, Arie V.
      Nieuw
CS   Fac MedDept Dent Basic SciSect Oral Biochem,Acad Ctr Dent, Free Univ
      Amsterdam, Boechorststr 7, NL-1081 BT, Amsterdam, Netherlands
      ajm.ligtenberg@vumc.nl
DT   Article
LA   English
ED   Entered STN: 19 Jan 2005
      Last Updated on STN: 19 Jan 2005
AB   SAG (salivary agglutinin), which is identical to gp-340 (glycoprotein-340)
      from the lung, is encoded by ***DMBTI*** (deleted in malignant brain
      tumours 1). It is a member of the SRCR (scavenger receptor cysteine-rich)

superfamily and contains 14 SRCR domains, 13 of which are highly similar.
SAG in saliva is partially complexed with IgA, which may be necessary for
bacterial binding. The goal of the present study was to characterize the
binding of purified SAG to IgA. SAG binds to a variety of proteins,
including serum and secretory IgA, alkaline phosphatase-conjugated IgGs
originating from rabbit, goat, swine and mouse, and lactoferrin and
albumin. Binding of IgA to SAG is calcium dependent and is inhibited by
0.5 M KCI, suggesting that electrostatic interactions are involved.
Binding of IgA was destroyed after reduction of SAG, suggesting that the
protein moiety is involved in binding. To pinpoint further the binding
domain for IgA on SAG, a number of consensus-based peptides of the SRCR
domains and SRCR interspersed domains were designed and synthesized.
ELISA binding studies with IgA indicated that only one of the peptides
tested, comprising amino acids 18-33 (QGRVEVLYRGSWGTVC) of the
109-amino-acid SRCR domain, exhibited binding to IgA. This domain is
identical to the domain of SAG that is involved in binding to bacteria.
Despite this similar binding site, IgA did not inhibit binding of
Streptococcus mutans to SAG or peptide. These results show that the
binding of IgA to SAG is specifically mediated by a peptide sequence on
the SRCR domains.

L20 ANSWER 10 OF 11 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
     STN
AN   2003:584033 BIOSIS <<LOGINID::20090423>>
DN   PREV200300583256
TI   The potential functional dualism of   ***DMBT1*** : Epithelial
     differentiation and pathogen-binding.
AU   Mollenhauer, Jan [Reprint Author]; Bikker, Floris; Helmke, Burkhard;
     Kollender, Gaby [Reprint Author]; Lyer, Stefan [Reprint Author]; Renner,
     Marcus [Reprint Author];   ***Ligtenberg, Antoon*** ; Madsen, Jens;
     Holmskov, Uffe; Otto, Herwart F.; Poustka, Annemarie [Reprint Author]
CS   Department for Molecular Genome Analysis, Deutsches
     Krebsforschungszentrum, Heidelberg, Germany
SO   International Journal of Molecular Medicine, (2003) Vol. 12, No.
     Supplement 1, pp. S9. print.
     Meeting Info.: 8th World Congress on Advances in Oncology and 6th
     International Symposium on Molecular Medicine. Crete, Greece. October
     16-18, 2003.
     ISSN: 1107-3756 (ISSN print).
DT   Conference; (Meeting)
     Conference; Abstract; (Meeting Abstract)
LA   English
ED   Entered STN: 10 Dec 2003
     Last Updated on STN: 10 Dec 2003

L20 ANSWER 11 OF 11 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
     STN   DUPLICATE 8
AN   2002:535766 BIOSIS <<LOGINID::20090423>>
DN   PREV200200535766
TI   Identification of the bacteria-binding peptide domain on salivary
     agglutinin (gp-340/ ***DMBT1***), a member of the scavenger receptor
     cysteine-rich superfamily.
AU   Bikker, Floris J. [Reprint author];   ***Ligtenberg, Antoon J. M.*** ;
     Nazmi, Kamran; Veerman, Enno C. I.; van't Hof, Wim; Bolscher, Jan G. M.;
     Poustka, Annemarie; Amerongen, Arie V. Nieuw; Mollenhauer, Jan
CS   Van der Boechorststraat 7, 1081 BT, Amsterdam, Netherlands
     fj.bikker.obc.acta@med.vu.nl

AB   Salivary agglutinin is encoded by   ***DMBT1***   and identical to gp-340,
      a member of the scavenger receptor cysteine-rich (SRCR) superfamily.
      Salivary agglutinin/DAMBT1 is known for its Streptococcus mutans
      agglutinating properties. This 300-400 kDa glycoprotein is composed of
      conserved peptide motifs: 14 SRCR domains that are separated by
      SRCR-interspersed domains (SIDs), 2 CUB (C1r/C1s Uegf Bmp1) domains, and a
      zona pellucida domain. We have searched for the peptide domains of
      agglutinin/ ***DMBT1***   responsible for bacteria binding. Digestion
      with endoproteinase Lys-C resulted in a protein fragment containing
      exclusively SRCR and SID domains that binds to S. mutans. To define more
      closely the S. mutans-binding domain, consensus-based peptides of the SRCR
      domains and SIDs were designed and synthesized. Only one of the SRCR
      peptides, designated SRCRP2, and none of the SID peptides bound to S.
      mutans. Strikingly, this peptide was also able to induce agglutination of
      S. mutans and a number of other bacteria. The repeated presence of this
      peptide in the native molecule endows agglutinin/ ***DMBT1***   with a
      general bacterial binding feature with a multivalent character. Moreover,
      our studies demonstrate for the first time that the polymorphic SRCR
      domains of salivary agglutinin/ ***DMBT1***   mediate ligand
      interactions.

=> e nieuw amerongen arie/au
E1   1   NIEUW AMERONGEN A V DR/AU
E2   1   NIEUW AMERONGEN A VAN/AU
E3   1 --> NIEUW AMERONGEN ARIE/AU
E4   165   NIEUW AMERONGEN ARIE V/AU
E5   1   NIEUW AMERONGEN ARIE V DR/AU
E6   1   NIEUW AMERONGEN GEERTEN P/AU
E7   2   NIEUW ARIE V/AU
E8   1   NIEUWALAND R/AU
E9   1   NIEUWALANDT D T/AU
E10   10   NIEUWAMERONGEN A V/AU
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E12   1   NIEUWAND M S/AU

=> s e1-e7 and dmbt?
L21   23 ("NIEUW AMERONGEN A V DR"/AU OR "NIEUW AMERONGEN A VAN"/AU OR
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               UW AMERONGEN ARIE V DR"/AU OR "NIEUW AMERONGEN GEERTEN P"/AU OR
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PROCESSING COMPLETED FOR L21
L22   10 DUP REM L21 (13 DUPLICATES REMOVED)

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 10 ANSWERS - CONTINUE? Y/(N):y

L22 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 1

AN   2009:402136 CAPLUS <<LOGINID::20090423>>
DN   150:327861
TI   ***DMBT1***   functions as pattern-recognition molecule for
        poly-sulfated and poly-phosphorylated ligands
AU   End, Caroline; Bikker, Floris; Renner, Marcus; Bergmann, Gaby; Lyer,
        Stefan; Blaich, Stephanie; Hudler, Melanie; Helmke, Burkhard; Gassler,
        Nikolaus; Autschbach, Frank; Ligtenberg, Antoon J. M.; Benner, Axel;
        Holmskov, Uffe; Schirmacher, Peter;   ***Nieuw Amerongen, Arie V.***   ;
        Rosenstiel, Philip; Sina, Christian; Franke, Andre; Hafner, Mathias;
        Kioschis, Petra; Schreiber, Stefan; Poustka, Annemarie; Mollenhauer, Jan
CS   Division of Molecular Genome Analysis, German Cancer Research Center,
        Heidelberg, Germany
SO   European Journal of Immunology (2009), 39(3), 833-842
        CODEN: EJIMAF; ISSN: 0014-2980
PB   Wiley-VCH Verlag GmbH & Co. KGaA
DT   Journal
LA   English
AB   Deleted in malignant brain tumors 1 (***DMBT1***) is a secreted
        glycoprotein displaying a broad bacterial-binding spectrum. Recent
        functional and genetic studies linked   ***DMBT1***   to the suppression
        of LPS-induced TLR4-mediated NF-.kappa.B activation and to the
        pathogenesis of Crohn's disease. Here, the authors aimed at unraveling
        the mol. basis of its function in mucosal protection and of its broad
        pathogen-binding specificity. The authors report that   ***DMBT1***
        directly interacts with dextran sulfate sodium (DSS) and carrageenan, a
        structurally similar sulfated polysaccharide, which is used as a
        texturizer and thickener in human dietary products. However, binding of
         DMBT1   does not reduce the cytotoxic effects of these agents to
        intestinal/epithelial cells in vitro. DSS and carrageenan compete for
         DMBT1 -mediated bacterial aggregation via interaction with its
        bacterial-recognition motif. Competition and ELISA studies identify
        poly-sulfated and poly-phosphorylated structures as ligands for this
        recognition motif, such as heparan sulfate, LPS, and lipoteichoic acid.
        Dose-response studies in   ***Dmbt1*** -/- and   ***Dmbt1*** +/+ mice
        utilizing the DSS-induced colitis model demonstrate a differential
        response only to low but not to high DSS doses. The authors propose that
         DMBT1   functions as pattern-recognition mol. for poly-sulfated and
        poly-phosphorylated ligands providing a mol. basis for its broad
        bacterial-binding specificity and its inhibitory effects on LPS-induced
        TLR4-mediated NF-.kappa.B activation.

L22   ANSWER 2 OF 10   MEDLINE on STN
AN   2008618576   MEDLINE <<LOGINID::20090423>>
DN   PubMed ID: 18713006
TI   A common binding motif for various bacteria of the bacteria-binding
        peptide SRCRP2 of   ***DMBT1*** /gp-340/salivary agglutinin.
AU   Leito Jelani T D; Ligtenberg Antoon J M; Nazmi Kamran; de
        Blieck-Hogervorst Jolanda M A; Veerman Enno C I;   ***Nieuw Amerongen
Arie***
   ***   V***
CS   Department of Oral Biochemistry, Academic Centre for Dentistry Amsterdam
        (ACTA), Vrije Universiteit and Universiteit van Amsterdam, Van der
        Boechorstsraat 7, NL-1081 BT Amsterdam, The Netherlands.. j.leito@vumc.nl
SO   Biological chemistry, (2008 Sep) Vol. 389, No. 9, pp. 1193-200.
        Journal code: 9700112. ISSN: 1431-6730.
CY   Germany: Germany, Federal Republic of
DT   Journal; Article; (JOURNAL ARTICLE)

LA   English
FS   Priority Journals
EM   200810
ED   Entered STN: 24 Sep 2008
      Last Updated on STN: 18 Oct 2008
      Entered Medline: 17 Oct 2008
AB   Abstract Salivary agglutinin (***DMBT1SAG***) is identical to lung
      glycoprotein-340 and encoded by deleted in malignant brain tumors-1. It
      is a member of the scavenger receptor cysteine-rich (SRCR) superfamily,
      proteins that have one or more SRCR domains. Salivary agglutinin plays a
      role in oral innate immunity by the binding and agglutination of oral
      streptococci. S. mutans has been shown to bind to a 16-mer peptide
      (QGRVEVLYRGSWGTVC) located within the SRCR domains. Within this peptide,
      designated SRCR Peptide 2, residues VEVL and W were critical for binding.
      The aim of this study was to investigate binding of ***DMBT1SAG*** to
      other bacteria. Therefore, interaction between a series of bacteria and
        DMBT1 (SAG), SRCR peptide 2 and its alanine substitution variants
      was studied in adhesion and agglutination assays. For different bacteria
      there was a highly significant correlation between adhesion to
        DMBT1SAG   and adhesion to SRCR peptide 2 suggesting that SRCR
      peptide 2 is the major bacteria binding site. An alanine substitution
      scan showed that 8 amino acids were involved in binding (xRVEVLYxxSWxxxx).
      The binding motifs varied for different species were found, but the
      residues VxVxY and W were always present. In conclusion, a common binding
      motif (RVEVLYxxxSW) within the SRCR domains is responsible for the broad
      bacteria-binding spectrum of ***DMBT1SAG*** .

L22   ANSWER 3 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN
AN   2007:1459431 CAPLUS <<LOGINID::20090423>>
DN   148:468801
TI   ***DMBT1***   confers mucosal protection in vivo and a deletion variant
      is associated with Crohn's Disease
AU   Renner, Marcus; Bergmann, Gaby; Krebs, Inge; End, Caroline; Lyer, Stefan;
      Hilberg, Frank; Helmke, Burkhard; Gassler, Nikolaus; Autschbach, Frank;
      Bikker, Floris; Strobel-Freidekind, Olga; Gronert-Sum, Sabine; Benner,
      Axel; Blaich, Stephanie; Wittig, Rainer; Hudler, Melanie; Ligtenberg,
      Antoon J.; Madsen, Jens; Holmskov, Uffe; Annese, Vito; Latiano, Anna;
      Schirmacher, Peter;   ***Nieuw Amerongen, Arie V.*** ; D'Amato, Mauro;
      Kioschis, Petra; Hafner, Mathias; Poustka, Annemarie; Mollenhauer, Jan
CS   Division of Molecular Genome Analysis, Deutsches Krebforschungszentrum,
      Heidelberg, Germany
SO   Gastroenterology (2007), 133(5), 1499-1509
      CODEN: GASTAB; ISSN: 0016-5085
PB   Elsevier Inc.
DT   Journal
LA   English
AB   Background & Aims: Impaired mucosal defense plays an important role in the
      pathogenesis of Crohn's disease (CD), one of the main subtypes of
      inflammatory bowel disease (IBD). Deleted in malignant brain tumors 1 (
        DMBT1) is a secreted scavenger receptor cysteine-rich protein
with
      predominant expression in the intestine and has been proposed to exert
      possible functions in regenerative processes and pathogen defense. Here,
      we aimed at analyzing the role of ***DMBT1*** in IBD. Methods: We
      studied ***DMBT1***   expression in IBD and normal tissues by quant.
      reverse transcription-polymerase chain reaction, immunohistochem., and
      mRNA in situ hybridization. Genetic polymorphisms within ***DMBT1***

were analyzed in an Italian IBD case-control sample.   ***Dmbt1*** -/-
mice were generated, characterized, and analyzed for their susceptibility
to dextran sulfate sodium-induced colitis. Results: ***DMBT1***
levels correlate with disease activity in inflamed IBD tissues. A highly
significant fraction of the patients with IBD displayed up-regulation of
  DMBT1   specifically in the intestinal epithelial surface cells and
Paneth cells. A deletion allele of ***DMBT1*** with a reduced no. of
scavenger receptor cysteine-rich domain coding exons is assocd. with an
increased risk of CD (P = .00056; odds ratio, 1.75) but not for ulcerative
colitis.   ***Dmbt1*** -/- mice display enhanced susceptibility to
dextran sulfate sodium-induced colitis and elevated Tnf, Il6, and Nod2
expression levels during inflammation. Conclusions: ***DMBT1***   may
play a role in intestinal mucosal protection and prevention of
inflammation. Impaired ***DMBT1***   function may contribute to the
pathogenesis of CD.
RE.CNT 47   THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD
                ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 4 OF 10 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
     DUPLICATE 2
AN   2008:70436 BIOSIS <<LOGINID::20090423>>
DN   PREV200800053239
TI   Salivary agglutinin/gilycoprotein-340/ ***DMBT1*** : a single molecule
     with variable composition and with different functions in infection,
     inflammation and cancer.
AU   Ligtenberg, Antoon J. M. [Reprint Author]; Veerman, Enno C. I.;
Nieuw
   ***   Amerongen, Arie V.*** ; Mollenhauer, Jan
CS   Free Univ Amsterdam, Acad Ctr Dent, Dept Oral Biochem, Boechorststr 7,
     NL-1081 BT Amsterdam, Netherlands
     ajm.ligtenberg@vumc.nl
SO   Biological Chemistry, (DEC 2007) Vol. 388, No. 12, pp. 1275-1289.
     ISSN: 1431-6730.
DT   Article
     General Review; (Literature Review)
LA   English
ED   Entered STN: 9 Jan 2008
     Last Updated on STN: 9 Jan 2008
AB   Salivary agglutinin (SAG), lung glycoprotein-340 (gp-340) and Deleted in
     Malignant Brain Tumours 1 (***DMBT1***) are three names for identical
     proteins encoded by the ***dmbt1*** gene.   ***DMBT1*** /SAG/gp-340
     belongs to the scavenger receptor cysteine-rich (SRCR) superfamily of
     proteins, a superfamily of secreted or membrane-bound proteins with SRCR
     domains that are highly conserved down to sponges, the most ancient
     metazoa. On the one hand, ***DMBT1***   may represent an innate defence
     factor acting as a pattern recognition molecule. It interacts with a
     broad range of pathogens, including cariogenic streptococci and
     Helicobacter pylori, influenza viruses and HIV, but also with mucosal
     defence proteins, such as IgA, surfactant proteins and MUC5B. Stimulation
     of alveolar macrophage migration, suppression of neutrophil oxidative
     burst and activation of the complement cascade point further to an
     important role in the regulation of inflammatory responses. On the other
     hand, ***DMBT1***   has been demonstrated to play a role in epithelial
     and stem cell differentiation. Inactivation of the gene coding for this
     protein may lead to disturbed differentiation, possibly resulting in
     tumour formation. These data strongly point to a role for   ***DMBT1***
     as a molecule linking innate immune processes with regenerative processes.

AN   2005:953991 CAPLUS <<LOGINID::20090423>>
DN   143:260332
TI   Use of ***DMBT1***   protein for capturing sulfate and phosphate groups
      exposed in disease-associated agents
IN   Mollenhauer, Jan; End, Caroline; Blaich, Stephanie; Bergmann, Gaby;
      Renner, Marcus; Lyer, Stefan; Wittig, Rainer; Poustka, Annemarie; Bikker,
      Floris; Ligtenberg, Anton; ***Nieuw-Amerongen, Arie*** ; Veerman, Enno
PA   Deutsches Krebsforschungszentrum Stiftung des Oeffentlichen Rechts,
      Germany
SO   Eur. Pat. Appl., 57 pp.
      CODEN: EPXXDW
DT   Patent
LA   English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 1568374	A1	20050831	EP 2004-4281	20040225

     R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
         IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

| WO 2005079834 | A1 | 20050901 | WO 2005-EP1994 | 20050225 |
| WO 2005079834 | A9 | 20051027 | | |

     W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
         CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
         GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
         LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
         NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
         TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
     RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
         AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
         EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
         RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
         MR, NE, SN, TD, TG

| EP 1727558 | A1 | 20061206 | EP 2005-732131 | 20050225 |

     R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
         IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR

US 20080234185	A1	20080925	US 2006-590657	20060825
PRAI EP 2004-4281	A	20040225		
WO 2005-EP1994	W	20050225		

AB   Disclosed is the use of ***DMBT1*** , or of the nucleic acid encoding
      it, for the manuf. of a medicament for the treatment of a patient
      suffering from a disease caused by an agent which possesses at least one
      accessible sulfate and/or at least one accessible phosphate group.
        DMBT1 may also be used as a diagnostic for diagnosing the
      susceptibility of an individual to sulfate or phosphate groups, as well in
      methods for diagnosis, prophylaxis or treatment of diseases caused by an
      agent which possesses at least one accessible sulfate and/or at least one
      accessible phosphate group. The invention is based on the discovery that
      human protein ***DMBT1*** (Deleted in Malignant Brain Tumors 1) is a
      dual-specific pattern recognition receptor for non-self (bacterial cell
      wall components, gp120 of HIV, damage-, inflammation-, and cancer-causing
      sulfated carbohydrates) and self structures (DNA, phospholipids, cell
      surface and extracellular matrix carbohydrates), which interacts with
      accessible sulfate and or phosphate groups, which are present on numerous
      compds., compns., and organisms. Pattern recognition of ***DMBT1***
      is mediated via an 11-amino acid motif (GRVEVLYRGSW) that binds sulfate

and phosphate groups. By acting as a dual-specific PRR, ***DMBT1***
may exert a general insulator function against a broad range of pathogens,
which predicts a contribution of ***DMBT1*** germline deletions to
human susceptibility to infection, inflammation, and cancer. Furthermore,
a 40% decreased level of ***DMBT1*** in male mice correlates with an
increased susceptibility and with a deficient protection against dextran
sulfate sodium-induced tissue damage and inflammation in the colon.
RE.CNT 7   THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 3
AN   2004:939392 CAPLUS <<LOGINID::20090423>>
DN   142:89715
TI   Bacteria binding by ***DMBT1*** /SAG/gp-340 is confined to the
     VEVLXXXXW motif in its scavenger receptor cysteine-rich domains
AU   Bikker, Floris J.; Ligtenberg, Antoon J. M.; End, Caroline; Renner,
     Marcus; Blaich, Stephanie; Lyer, Stefan; Wittig, Rainer; van't Hof, Wim;
     Veerman, Enno C. I.; Nazmi, Kamran; de Blieck-Hogervorst, Jolanda M. A.;
     Kioschis, Petra; ***Nieuw Amerongen, Arie V.*** ; Poustka, Annemarie;
     Mollenhauer, Jan
CS   Academic Centre for Dentistry Amsterdam (ACTA), Department of Oral
     Biochemistry, Vrije Universiteit en Universiteit van Amsterdam, 68163,
     Neth.
SO   Journal of Biological Chemistry (2004), 279(46), 47699-47703
     CODEN: JBCHA3; ISSN: 0021-9258
PB   American Society for Biochemistry and Molecular Biology
DT   Journal
LA   English
AB   The scavenger receptor cysteine-rich (SRCR) proteins form an archaic group
     of metazoan proteins characterized by the presence of SRCR domains. These
     proteins are classified in group A and B based on the no. of conserved
     cysteine residues in their SRCR domains, i.e. 6 for group A and 8 for
     group B. The protein ***DMBT1*** (deleted in malignant brain tumors
     1), which is identical to salivary agglutinin and lung gp-340, belongs to
     the group B SRCR proteins and is considered to be involved in tumor
     suppression and host defense by pathogen binding. In a previous study we
     used nonoverlapping synthetic peptides covering the SRCR consensus
     sequence to identify a 16-amino acid bacteria-binding protein loop
     (peptide SRCRP2; QGRVEVLYRGSWGTVC) within the SRCR domains. In this
     study, using overlapping peptides, we pinpointed the minimal
     bacteria-binding site on SRCRP2, and thus ***DMBT1*** , to an 11-amino
     acid motif (***DMBT1*** pathogen-binding site 1 or ***DMBT1pbs1***
     ; GRVEVLYRGSW). An alanine substitution scan revealed that VEVL and Trp
     are crit. residues in this motif. Bacteria binding by ***DMBT1pbs1***
     was different from the bacteria binding by the macrophage receptor MARCO
     in which an RXR motif was crit. In addn., the homologous consensus
     sequences of a no. of SRCR proteins were synthesized and tested for
     bacteria binding. Only consensus sequences of ***DMBT1*** orthologs
     bound bacteria by this motif.
RE.CNT 37   THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 7 OF 10   MEDLINE on STN
AN   2004474758   MEDLINE <<LOGINID::20090423>>
DN   PubMed ID: 15385529
TI   A peptide domain of bovine milk lactoferrin inhibits the interaction
     between streptococcal surface protein antigen and a salivary agglutinin

peptide domain.
AU   Oho Takahiko; Bikker Floris J;   ***Nieuw Amerongen Arie V***   ; Groenink
      Jasper
CS   Department of Preventive Dentistry, Kyushu University Faculty of Dental
      Sciences, Fukuoka, Japan.. oho@denta.hal.kagoshima-u.ac.jp
SO   Infection and immunity, (2004 Oct) Vol. 72, No. 10, pp. 6181-4.
      Journal code: 0246127. ISSN: 0019-9567.
      Report No.: NLM-PMC517587.
CY   United States
DT   Journal; Article; (JOURNAL ARTICLE)
LA   English
FS   Priority Journals
EM   200410
ED   Entered STN: 24 Sep 2004
      Last Updated on STN: 26 Oct 2004
      Entered Medline: 25 Oct 2004
AB   The peptide domain of salivary agglutinin responsible for its interaction
      with cell surface protein antigen (PAc) of Streptococcus mutans or bovine
      lactoferrin was found in the same peptide, scavenger receptor
      cysteine-rich domain peptide 2 (SRCRP2). Inhibition studies suggest that
      PAc and lactoferrin, of which residues 480 to 492 seem important,
      competitively bind to the SRCRP2 domain of salivary agglutinin.

L22   ANSWER 8 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 4
AN   2004:777946 CAPLUS <<LOGINID::20090423>>
DN   141:364852
TI   Binding of salivary agglutinin to IgA
AU   Ligtenberg, Antoon J. M.; Bikker, Floris J.; De Blieck-Hogervorst, Jolanda
      M. A.; Veerman, Enno C. I.;   ***Nieuw Amerongen, Arie V.***
CS   Department of Dental Basic Sciences, Section Oral Biochemistry, Academic
      Centre for Dentistry, Medical Faculty of the Free University, Amsterdam,
      1081 BT, Neth.
SO   Biochemical Journal (2004), 383(1), 159-164
      CODEN: BIJOAK; ISSN: 0264-6021
PB   Portland Press Ltd.
DT   Journal
LA   English
AB   SAG (salivary agglutinin), which is identical to gp-340 (glycoprotein-340)
      from the lung, is encoded by   ***DMBT1***   (deleted in malignant brain
      tumors 1). It is a member of the SRCR (scavenger receptor cysteine-rich)
      superfamily and contains 14 SRCR domains, 13 of which are highly similar.
      SAG in saliva is partially complexed with IgA, which may be necessary for
      bacterial binding. The goal of the present study was to characterize the
      binding of purified SAG to IgA. SAG binds to a variety of proteins,
      including serum and secretory IgA, alk. phosphatase-conjugated IgGs
      originating from rabbit, goat, swine and mouse, and lactoferrin and
      albumin. Binding of IgA to SAG is calcium dependent and is inhibited by
      0.5 M KCl, suggesting that electrostatic interactions are involved.
      Binding of IgA was destroyed after redn. of SAG, suggesting that the
      protein moiety is involved in binding. To pinpoint further the binding
      domain for IgA on SAG, a no. of consensus-based peptides of the SRCR
      domains and SRCR interspersed domains were designed and synthesized.
      ELISA binding studies with IgA indicated that only one of the peptides
      tested, comprising amino acids 18-33 (QGRVEVLYRGSWGTVC) of the
      109-amino-acid SRCR domain, exhibited binding to IgA. This domain is
      identical to the domain of SAG that is involved in binding to bacteria.
      Despite this similar binding site, IgA did not inhibit binding of

Streptococcus mutans to SAG or peptide. These results show that the
        binding of IgA to SAG is specifically mediated by a peptide sequence on
        the SRCR domains.
RE.CNT 24   THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
                 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22   ANSWER 9 OF 10 CAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 5
AN   2002:678006 CAPLUS <<LOGINID::20090423>>
DN   137:334428
TI   Identification of the bacteria-binding peptide domain on salivary
      agglutinin (gp-340/ ***DMBT1***), a member of the scavenger receptor
      cysteine-rich superfamily
AU   Bikker, Floris J.; Ligtenberg, Antoon J. M.; Nazmi, Kamran; Veerman, Enno
      C. I.; van't Hof, Wim; Bolscher, Jan G. M.; Poustka, Annemarie;
Nieuw
   ***   Amerongen, Arie V.*** ; Mollenhauer, Jan
CS   Department of Dental Basic Sciences, Section of Oral Biochemistry,
      Academic Centre for Dentistry Amsterdam (ACTA), Amsterdam, 1081 BT, Neth.
SO   Journal of Biological Chemistry (2002), 277(35), 32109-32115
      CODEN: JBCHA3; ISSN: 0021-9258
PB   American Society for Biochemistry and Molecular Biology
DT   Journal
LA   English
AB   Salivary agglutinin is encoded by   ***DMBT1***   and identical to gp-340,
      a member of the scavenger receptor cysteine-rich (SRCR) superfamily.
      Salivary agglutinin/ ***DMBT1***   is known for its Streptococcus mutans
      agglutinating properties. This 300-400 kDa glycoprotein is composed of
      conserved peptide motifs: 14 SRCR domains that are sepd. by
      SRCR-interspersed domains (SIDs), 2 CUB (C1r/C1s Uegf Bmp1) domains, and a
      zona pellucida domain. We have searched for the peptide domains of
      agglutinin/ ***DMBT1***   responsible for bacteria binding. Digestion
      with endoproteinase Lys-C resulted in a protein fragment contg.
      exclusively SRCR and SID domains that binds to S. mutans. To define more
      closely the S. mutans-binding domain, consensus-based peptides of the SRCR
      domains and SIDs were designed and synthesized. Only one of the SRCR
      peptides, designated SRCRP2, and none of the SID peptides bound to S.
      mutans. Strikingly, this peptide was also able to induce agglutination of
      S. mutans and a no. of other bacteria. The repeated presence of this
      peptide in the native mol. endows agglutinin/ ***DMBT1***   with a
      general bacterial binding feature with a multivalent character. Moreover,
      our studies demonstrate for the first time that the polymorphic SRCR
      domains of salivary agglutinin/ ***DMBT1***   mediate ligand
      interactions.
RE.CNT 40   THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD
                 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22   ANSWER 10 OF 10 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on
      STN   DUPLICATE 6
AN   2001:514300 BIOSIS <<LOGINID::20090423>>
DN   PREV200100514300
TI   Human salivary agglutinin binds to lung surfactant protein-D and is
      identical with scavenger receptor protein gp-340.
AU   Ligtenberg, Toon J. M. [Reprint author]; Bikker, Floris J.; Groenink,
      Jasper; Tornoe, Ida; Leth-Larsen, Rikke; Veerman, Enno C. I.;   ***Nieuw***
   ***   Amerongen, Arie V.*** ; Holmskov, Uffe
CS   Department of Basic Dental Sciences, Academic Centre for Dentistry
      Amsterdam (ACTA), van der Boechorststraat 7, 1081 BT, Amsterdam,

AB   Salivary agglutinin is a 300-400 kDa salivary glycoprotein that binds to
      antigen B polypeptides of oral streptococci, thereby playing a role in
      their colonization and the development of caries. A mass spectrum was
      recorded of a trypsin digest of agglutinin. A dominant peak of 1460 Da
      was sequenced by quadrupole time-of-flight (Q-TOF) tandem MS. The
      sequence showed 100% identity with part of the scavenger receptor
      cysteine-rich ('SRCR') domain found in gp-340/ ***DMBT1***   (deleted in
      malignant brain tumours-1). The mass spectrum revealed 11 peaks with an
      identical mass as a computer-simulated trypsin digest of gp-340. gp-340 is
      a 340 kDa glycoprotein isolated from bronchoalveolar lavage fluid that
      binds specifically to lung surfactant protein-D.   ***DMBT1***   is a
      candidate tumour suppressor gene. A search in the human genome revealed
      only one copy of this gene. The molecular mass, as judged from SDS/PAGE
      and the amino acid composition of agglutinin, was found to be nearly
      identical with that of gp-340. It was shown by Western blotting that
      monoclonal antibodies against gp-340 reacted with salivary agglutinin, and
      monoclonals against agglutinin reacted with gp-340. It was demonstrated
      that gp-340 and agglutinin bound in a similar way to Streptococcus mutans
      and surfactant protein-D. Histochemically, the distribution of gp-340 in
      the submandibular salivary glands was identical with the agglutinin
      distribution, as shown in a previous paper (Takano, Bogert, Malamud, Lally
      and Hand (1991) Anat. Rec. 230, 307-318). We conclude that agglutinin is
      identical with gp-340, and that this molecule interacts with S. mutans and
      surfactant protein-D.

=> e veerman enno/au
E1   1   VEERMAN ENGELMUNDUS CORNELIS I/AU
E2   5   VEERMAN ENGELMUNDUS CORNELIS IGNATIUS/AU
E3   14 --> VEERMAN ENNO/AU
E4   4   VEERMAN ENNO C/AU
E5   239   VEERMAN ENNO C I/AU
E6   1   VEERMAN ENNO C L/AU
E7   2   VEERMAN F B/AU
E8   6   VEERMAN F R/AU
E9   2   VEERMAN F W J/AU
E10   1   VEERMAN FRITS/AU
E11   152   VEERMAN G/AU
E12   13   VEERMAN G J/AU

=> s e3-e6 and dmbt?
L23   26 ("VEERMAN ENNO"/AU OR "VEERMAN ENNO C"/AU OR "VEERMAN ENNO C
                I"/AU OR "VEERMAN ENNO C L"/AU) AND DMBT?

=> dup rem 123
PROCESSING COMPLETED FOR L23
L24   7 DUP REM L23 (19 DUPLICATES REMOVED)

L24   ANSWER 1 OF 7 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 1
AN   2008:655889 BIOSIS <<LOGINID::20090423>>
DN   PREV200800655888
TI   A common binding motif for various bacteria of the bacteria-binding
      peptide SRCRP2 of ***DMBT1*** /gp-340/salivary agglutinin.
AU   Leito, Jelani T. D. [Reprint Author]; Ligtenberg, Antoon J. M.; Nazmi,
      Kamran; de Blieck-Hogervorst, Jolanda M. A.;   ***Veerman, Enno C. I.***
      ; Amerongen, Arie V. Nieuw
CS   Vrije Univ, Acad Ctr Dent Amsterdam ACTA, Dept Oral Biochem, Boechorststr
      7, NL-1081 BT Amsterdam, Netherlands
      j.leito@vumc.nl
SO   Biological Chemistry, (SEP 2008) Vol. 389, No. 9, pp. 1193-1200.
      ISSN: 1431-6730.
DT   Article
LA   English
ED   Entered STN: 27 Nov 2008
      Last Updated on STN: 27 Nov 2008
AB   Salivary agglutinin (***DMBT1*** (SAG)) is identical to lung
      glycoprotein-340 and encoded by the deleted in malignant brain tumors-1
      gene. It is a member of the scavenger receptor cysteine-rich (SRCR)
      superfamily, proteins that have one or more SRCR domains. Salivary
      agglutinin plays a role in oral innate immunity by the binding and
      agglutination of oral streptococci. Streptococcus mutans has been shown
      to bind to a 16-mer peptide (QGRVEV LYRGSWGTVC) located within the SRCR
      domains. Within this peptide, designated SRCR peptide 2, residues VEVL
      and Ware critical for binding. The aim of this study was to investigate
      binding of ***DMBT1*** (SAG) to other bacteria. Therefore, interaction
      between a series of bacteria and ***DMBT1*** (SAG), SRCR peptide 2 and
      its alanine substitution variants was investigated in adhesion and
      agglutination assays. For different bacteria there was a highly
      significant correlation between adhesion to ***DMBT1*** (SAG) and
      adhesion to SRCR peptide 2, suggesting that SRCR peptide 2 is the major
      bacteria-binding site. An alanine substitution scan showed that eight
      amino acids are involved in binding (xRVEVLYxxSWxxxx). The binding motifs
      varied for different species, but the residues VxVxY and W are always
      present. In conclusion, a common binding motif (RVEVLYxxxSW) within the
      SRCR domains is responsible for the broad bacteria-binding spectrum of
       DMBT1 (SAG).

L24   ANSWER 2 OF 7 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 2
AN   2008:70436 BIOSIS <<LOGINID::20090423>>
DN   PREV200800053239
TI   Salivary agglutinin/gilycoprotein-340/ ***DMBT1*** : a single molecule
      with variable composition and with different functions in infection,
      inflammation and cancer.
AU   Ligtenberg, Antoon J. M. [Reprint Author];   ***Veerman, Enno C. I.*** ;
      Nieuw Amerongen, Arie V.; Mollenhauer, Jan
CS   Free Univ Amsterdam, Acad Ctr Dent, Dept Oral Biochem, Boechorststr 7,
      NL-1081 BT Amsterdam, Netherlands
      ajm.ligtenberg@vumc.nl
SO   Biological Chemistry, (DEC 2007) Vol. 388, No. 12, pp. 1275-1289.

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      ISSN: 1431-6730.
DT    Article
      General Review; (Literature Review)
LA    English
ED    Entered STN: 9 Jan 2008
      Last Updated on STN: 9 Jan 2008
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AB    Salivary agglutinin (SAG), lung glycoprotein-340 (gp-340) and Deleted in
      Malignant Brain Tumours 1 (  ***DMBT1***  ) are three names for identical
      proteins encoded by the  ***dmbt1***  gene.   ***DMBT1***  /SAG/gp-340
      belongs to the scavenger receptor cysteine-rich (SRCR) superfamily of
      proteins, a superfamily of secreted or membrane-bound proteins with SRCR
      domains that are highly conserved down to sponges, the most ancient
      metazoa.  On the one hand,  ***DMBT1***   may represent an innate defence
      factor acting as a pattern recognition molecule.  It interacts with a
      broad range of pathogens, including cariogenic streptococci and
      Helicobacter pylori, influenza viruses and HIV, but also with mucosal
      defence proteins, such as IgA, surfactant proteins and MUC5B.  Stimulation
      of alveolar macrophage migration, suppression of neutrophil oxidative
      burst and activation of the complement cascade point further to an
      important role in the regulation of inflammatory responses.  On the other
      hand,  ***DMBT1***   has been demonstrated to play a role in epithelial
      and stem cell differentiation.  Inactivation of the gene coding for this
      protein may lead to disturbed differentiation, possibly resulting in
      tumour formation.  These data strongly point to a role for  ***DMBT1***
      as a molecule linking innate immune processes with regenerative processes.
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L24   ANSWER 3 OF 7  CAPLUS  COPYRIGHT 2009 ACS on STN
AN    2005:953991  CAPLUS <<LOGINID::20090423>>
DN    143:260332
TI    Use of  ***DMBT1***   protein for capturing sulfate and phosphate groups
      exposed in disease-associated agents
IN    Mollenhauer, Jan; End, Caroline; Blaich, Stephanie; Bergmann, Gaby;
      Renner, Marcus; Lyer, Stefan; Wittig, Rainer; Poustka, Annemarie; Bikker,
      Floris; Ligtenberg, Anton; Nieuw-Amerongen, Arie;   ***Veerman, Enno***
PA    Deutsches Krebsforschungszentrum Stiftung des Oeffentlichen Rechts,
      Germany
SO    Eur. Pat. Appl., 57 pp.
      CODEN: EPXXDW
DT    Patent
LA    English
FAN.CNT 1
      PATENT NO.           KIND   DATE       APPLICATION NO.        DATE
      ---------------      ----   --------   --------------------   --------
PI    EP 1568374           A1     20050831   EP 2004-4281           20040225
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
      WO 2005079834        A1     20050901   WO 2005-EP1994         20050225
      WO 2005079834        A9     20051027
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
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              RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
              MR, NE, SN, TD, TG
        EP 1727558          A1    20061206    EP 2005-732131          20050225
          R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
              IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
        US 20080234185       A1    20080925    US 2006-590657          20060825
PRAI  EP 2004-4281          A     20040225
      WO 2005-EP1994        W     20050225
```

AB   Disclosed is the use of   ***DMBT1***   , or of the nucleic acid encoding
      it, for the manuf. of a medicament for the treatment of a patient
      suffering from a disease caused by an agent which possesses at least one
      accessible sulfate and/or at least one accessible phosphate group.
        DMBT1   may also be used as a diagnostic for diagnosing the
      susceptibility of an individual to sulfate or phosphate groups, as well in
      methods for diagnosis, prophylaxis or treatment of diseases caused by an
      agent which possesses at least one accessible sulfate and/or at least one
      accessible phosphate group. The invention is based on the discovery that
      human protein   ***DMBT1***   (Deleted in Malignant Brain Tumors 1) is a
      dual-specific pattern recognition receptor for non-self (bacterial cell
      wall components, gp120 of HIV, damage-, inflammation-, and cancer-causing
      sulfated carbohydrates) and self structures (DNA, phospholipids, cell
      surface and extracellular matrix carbohydrates), which interacts with
      accessible sulfate and or phosphate groups, which are present on numerous
      compds., compns., and organisms. Pattern recognition of   ***DMBT1***
      is mediated via an 11-amino acid motif (GRVEVLYRGSW) that binds sulfate
      and phosphate groups. By acting as a dual-specific PRR,   ***DMBT1***
      may exert a general insulator function against a broad range of pathogens,
      which predicts a contribution of   ***DMBT1***   germline deletions to
      human susceptibility to infection, inflammation, and cancer. Furthermore,
      a 40% decreased level of   ***DMBT1***   in male mice correlates with an
      increased susceptibility and with a deficient protection against dextran
      sulfate sodium-induced tissue damage and inflammation in the colon.
RE.CNT 7   THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24   ANSWER 4 OF 7 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
      DUPLICATE 3
AN   2005:69186 BIOSIS <<LOGINID::20090423>>
DN   PREV200500070157
TI   Bacteria binding by   ***DMBT1***   /SAG/gp-340 is confined to the
      VEVLXXXXW motif in its scavenger receptor cysteine-rich domains.
AU   Bikker, Floris J.; Ligtenberg, Antoon J. M. [Reprint Author]; End,
      Caroline; Renner, Marcus; Blaich, Stephanie; Lyer, Stefan; Wittig, Rainer;
      van't Hof, Wim;   ***Veerman, Enno C. I.***   ; Nazmi, Kamran; De
      Blieck-Hogervorst, Jolanda M. A.; Kioschis, Petra; Amerongen, Arie V.
      Nieuw; Poustka, Annemarie; Mollenhauer, Jan
CS   Acad Ctr Dent AmsterdamDept Oral Biochem, Free Univ Amsterdam,
      Boechorststr 7, NL-1081 BT, Amsterdam, Netherlands
      ajm.ligtenberg@vumc.nl
SO   Journal of Biological Chemistry, (November 12 2004) Vol. 279, No. 46, pp.
      47699-47703. print.
      CODEN: JBCHA3. ISSN: 0021-9258.
DT   Article
LA   English
ED   Entered STN: 16 Feb 2005
      Last Updated on STN: 16 Feb 2005
AB   The scavenger receptor cysteine-rich (SRCR) proteins form an archaic group

of metazoan proteins characterized by the presence of SRCR domains. These
proteins are classified in group A and B based on the number of conserved
cysteine residues in their SRCR domains, i.e. six for group A and eight
for group B. The protein   ***DMBT1***   (deleted in malignant brain
tumors 1), which is identical to salivary agglutinin and lung gp-340,
belongs to the group B SRCR proteins and is considered to be involved in
tumor suppression and host defense by pathogen binding. In a previous
study we used non-overlapping synthetic peptides covering the SRCR
consensus sequence to identify a 16-amino acid bacteria-binding protein
loop (peptide SRCRP2; QGRVEVLYRGSWGTVC) within the SRCR domains. In this
study, using overlapping peptides, we pinpointed the minimal
bacteria-binding site on SRCRP2, and thus   ***DMBT1***   , to an 11-amino
acid motif (***DMBT1***   pathogen-binding site 1 or   ***DMBT1pbs1***
; GRVEVLYRGSW). An alanine substitution scan revealed that VEVL and Trp
are critical residues in this motif. Bacteria binding by
  DMBT1pbs1   was different from the bacteria binding by the
macrophage receptor MARCO in which an RXR motif was critical. In
addition, the homologous consensus sequences of a number of SRCR proteins
were synthesized and tested for bacteria binding. Only consensus
sequences of   ***DMBT1***   orthologues bound bacteria by this motif.

AN   2005:35700 BIOSIS <<LOGINID::20090423>>
DN   PREV200500033927
TI   Binding of salivary agglutinin to IgA.
AU   Ligtenberg, Antoon J. M. [Reprint Author]; Bikker, Floris J.; De
      Blieck-Hogervorst, Jolanda M. A.;   ***Veerman, Enno C. I.***   ;
      Amerongen, Arie V. Nieuw
CS   Fac MedDept Dent Basic SciSect Oral Biochem,Acad Ctr Dent, Free Univ
      Amsterdam, Boechorststr 7, NL-1081 BT, Amsterdam, Netherlands
      ajm.ligtenberg@vumc.nl
SO   Biochemical Journal, (October 1 2004) Vol. 383, No. Part 1, pp. 159-164.
      print.
      ISSN: 0264-6021.
DT   Article
LA   English
ED   Entered STN: 19 Jan 2005
      Last Updated on STN: 19 Jan 2005
AB   SAG (salivary agglutinin), which is identical to gp-340 (glycoprotein-340)
      from the lung, is encoded by   ***DMBTI***   (deleted in malignant brain
      tumours 1). It is a member of the SRCR (scavenger receptor cysteine-rich)
      superfamily and contains 14 SRCR domains, 13 of which are highly similar.
      SAG in saliva is partially complexed with IgA, which may be necessary for
      bacterial binding. The goal of the present study was to characterize the
      binding of purified SAG to IgA. SAG binds to a variety of proteins,
      including serum and secretory IgA, alkaline phosphatase-conjugated IgGs
      originating from rabbit, goat, swine and mouse, and lactoferrin and
      albumin. Binding of IgA to SAG is calcium dependent and is inhibited by
      0.5 M KCI, suggesting that electrostatic interactions are involved.
      Binding of IgA was destroyed after reduction of SAG, suggesting that the
      protein moiety is involved in binding. To pinpoint further the binding
      domain for IgA on SAG, a number of consensus-based peptides of the SRCR
      domains and SRCR interspersed domains were designed and synthesized.
      ELISA binding studies with IgA indicated that only one of the peptides
      tested, comprising amino acids 18-33 (QGRVEVLYRGSWGTVC) of the
      109-amino-acid SRCR domain, exhibited binding to IgA. This domain is

identical to the domain of SAG that is involved in binding to bacteria.
Despite this similar binding site, IgA did not inhibit binding of
Streptococcus mutans to SAG or peptide. These results show that the
binding of IgA to SAG is specifically mediated by a peptide sequence on
the SRCR domains.

L24   ANSWER 6 OF 7 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
       DUPLICATE 5
AN   2002:535766 BIOSIS <<LOGINID::20090423>>
DN   PREV200200535766
TI   Identification of the bacteria-binding peptide domain on salivary
       agglutinin (gp-340/ ***DMBT1***), a member of the scavenger receptor
       cysteine-rich superfamily.
AU   Bikker, Floris J. [Reprint author]; Ligtenberg, Antoon J. M.; Nazmi,
       Kamran;   ***Veerman, Enno C. I.*** ; van't Hof, Wim; Bolscher, Jan G.
       M.; Poustka, Annemarie; Amerongen, Arie V. Nieuw; Mollenhauer, Jan
CS   Van der Boechorststraat 7, 1081 BT, Amsterdam, Netherlands
       fj.bikker.obc.acta@med.vu.nl
SO   Journal of Biological Chemistry, (August 30, 2002) Vol. 277, No. 35, pp.
       32109-32115. print.
       CODEN: JBCHA3. ISSN: 0021-9258.
DT   Article
LA   English
ED   Entered STN: 16 Oct 2002
       Last Updated on STN: 16 Oct 2002
AB   Salivary agglutinin is encoded by   ***DMBT1***   and identical to gp-340,
       a member of the scavenger receptor cysteine-rich (SRCR) superfamily.
       Salivary agglutinin/DAMBT1 is known for its Streptococcus mutans
       agglutinating properties. This 300-400 kDa glycoprotein is composed of
       conserved peptide motifs: 14 SRCR domains that are separated by
       SRCR-interspersed domains (SIDs), 2 CUB (C1r/C1s Uegf Bmp1) domains, and a
       zona pellucida domain. We have searched for the peptide domains of
       agglutinin/ ***DMBT1***   responsible for bacteria binding. Digestion
       with endoproteinase Lys-C resulted in a protein fragment containing
       exclusively SRCR and SID domains that binds to S. mutans. To define more
       closely the S. mutans-binding domain, consensus-based peptides of the SRCR
       domains and SIDs were designed and synthesized. Only one of the SRCR
       peptides, designated SRCRP2, and none of the SID peptides bound to S.
       mutans. Strikingly, this peptide was also able to induce agglutination of
       S. mutans and a number of other bacteria. The repeated presence of this
       peptide in the native molecule endows agglutinin/ ***DMBT1***   with a
       general bacterial binding feature with a multivalent character. Moreover,
       our studies demonstrate for the first time that the polymorphic SRCR
       domains of salivary agglutinin/ ***DMBT1***   mediate ligand
       interactions.

L24   ANSWER 7 OF 7 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
       DUPLICATE 6
AN   2001:514300 BIOSIS <<LOGINID::20090423>>
DN   PREV200100514300
TI   Human salivary agglutinin binds to lung surfactant protein-D and is
       identical with scavenger receptor protein gp-340.
AU   Ligtenberg, Toon J. M. [Reprint author]; Bikker, Floris J.; Groenink,
       Jasper; Tornoe, Ida; Leth-Larsen, Rikke;   ***Veerman, Enno C. I.*** ;
       Nieuw Amerongen, Arie V.; Holmskov, Uffe
CS   Department of Basic Dental Sciences, Academic Centre for Dentistry
       Amsterdam (ACTA), van der Boechorststraat 7, 1081 BT, Amsterdam,

AB   Salivary agglutinin is a 300-400 kDa salivary glycoprotein that binds to
antigen B polypeptides of oral streptococci, thereby playing a role in
their colonization and the development of caries. A mass spectrum was
recorded of a trypsin digest of agglutinin. A dominant peak of 1460 Da
was sequenced by quadrupole time-of-flight (Q-TOF) tandem MS. The
sequence showed 100% identity with part of the scavenger receptor
cysteine-rich ('SRCR') domain found in gp-340/ ***DMBT1***   (deleted in
malignant brain tumours-1). The mass spectrum revealed 11 peaks with an
identical mass as a computer-simulated trypsin digest of gp-340. gp-340 is
a 340 kDa glycoprotein isolated from bronchoalveolar lavage fluid that
binds specifically to lung surfactant protein-D.   ***DMBT1***   is a
candidate tumour suppressor gene. A search in the human genome revealed
only one copy of this gene. The molecular mass, as judged from SDS/PAGE
and the amino acid composition of agglutinin, was found to be nearly
identical with that of gp-340. It was shown by Western blotting that
monoclonal antibodies against gp-340 reacted with salivary agglutinin, and
monoclonals against agglutinin reacted with gp-340. It was demonstrated
that gp-340 and agglutinin bound in a similar way to Streptococcus mutans
and surfactant protein-D. Histochemically, the distribution of gp-340 in
the submandibular salivary glands was identical with the agglutinin
distribution, as shown in a previous paper (Takano, Bogert, Malamud, Lally
and Hand (1991) Anat. Rec. 230, 307-318). We conclude that agglutinin is
identical with gp-340, and that this molecule interacts with S. mutans and
surfactant protein-D.

=> s DMBT?
L25   859 DMBT?

=> dup rem l25
PROCESSING COMPLETED FOR L25
L26   377 DUP REM L25 (482 DUPLICATES REMOVED)

=> s l26 and brain
L27   122 L26 AND BRAIN

=> s l27 and (treat? or prevent? or suscept?)
L28   22 L27 AND (TREAT? OR PREVENT? OR SUSCEPT?)

=> d bib ab kwic 1-
YOU HAVE REQUESTED DATA FROM 22 ANSWERS - CONTINUE? Y/(N):y

L28 ANSWER 1 OF 22 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
AN   2008:112593 BIOSIS <<LOGINID::20090423>>
DN   PREV200800114726
TI   ***DMBT1***   confers mucosal protection in vivo and a deletion variant
is associated with Crohn's disease.

AU   Renner, Marcus; Bergmann, Gaby; Krebs, Inge; End, Caroline; Lyer, Stefan;
      Hilberg, Frank; Helmke, Burkhard; Gassler, Nikolaus; Autschbach, Frank;
      Bikker, Floris; Strobel-Freidekind, Olga; Gronert-Sum, Sabine; Benner,
      Axel; Blaich, Stephanie; Wittig, Rainer; Hudler, Melanie; Ligtenberg,
      Antoon J.; Madsen, Jens; Holmskov, Uffe; Annese, Vito; Latiano, Anna;
      Schirmacher, Peter; Amerongen, Arie V. Nieuw; D'Amato, Mauro; Kioschis,
      Petra; Hafner, Mathias; Poustka, Annemarie; Mollenhauer, Jan [Reprint
      Author]
CS   Deutsch Krebsforschungszentrum, Div Mol Genome Anal, Neuenheimer Feld 280,
      D-69120 Heidelberg, Germany
      j.mollenhauer@dkfz.de
AB   Background & Aims: Impaired mucosal. defense plays an important role in
      the pathogenesis of Crohn's disease (CD), one of the main subtypes of
      inflammatory bowel disease (IBD). Deleted in malignant   ***brain***
      tumors 1(***DMBT1***) is a secreted scavenger receptor cysteine-rich
      protein with predominant expression in. the intestine and has been
      proposed to exert possible functions in regenerative processes and
      pathogen defense. Here, we aimed at analyzing the role of   ***DMBT1***
      in IBD. Methods: We studied   ***DMBT1***   expression in IBD and normal
      tissues by quantitative reverse transcription-polymerase chain reaction,
      immunohistochemistry, and mRNA in situ hybridization. Genetic
      polymorphisms within   ***DMBT1***   were analyzed in an Italian IBD
      case-control sample.   ***Dmbt1***   (-/-) mice were generated,
      characterized, and analyzed for their   ***susceptibility***   to dextran
      sulfate sodium-induced colitis. Results: ***DMBT1***   levels correlate
      with disease activity in inflamed IBD tissues. A highly significant
      fraction of the patients with IBD displayed up-regulation of   ***DMBT1***
      specifically in the intestinal epithelial surface cells and Paneth cells.
      A deletion allele of   ***DMBT1***   with a reduced: number of scavenger
      receptor cysteine-rich domain coding exons is associated with an increased
      risk of CD (P =.00056; odds ratio, 1.75) but not for ulcerative colitis.
         Dmbt1   (-/-) mice display enhanced   ***susceptibility***   to
      dextran sulfate sodium-induced colitis and elevated Tnf, Il6, and Nod2
      expression levels during inflammation. Conclusions: ***DMBT1***   may
      play a role in intestinal mucosal protection and   ***prevention***   of
      inflammation. Impaired   ***DMBT1***   function may contribute to the
      pathogenesis of CD.
TI   ***DMBT1***   confers mucosal protection in vivo and a deletion variant
      is associated with Crohn's disease.

sulfate sodium-induced colitis. Results: ***DMBT1*** levels correlate
with disease activity in inflamed IBD tissues. A highly significant
fraction of the patients with IBD displayed up-regulation of ***DMBT1***
specifically in the intestinal epithelial surface cells and Paneth cells.
A deletion allele of ***DMBT1*** with a reduced: number of scavenger
receptor cysteine-rich domain coding exons is associated with an increased
risk of CD (P =.00056; odds ratio, 1.75) but not for ulcerative colitis.
   Dmbt1 (-/-) mice display enhanced ***susceptibility*** to
dextran sulfate sodium-induced colitis and elevated Tnf, Il6, and Nod2
expression levels during inflammation. Conclusions: ***DMBT1*** may
play a role in intestinal mucosal protection and ***prevention*** of
inflammation. Impaired ***DMBT1*** function may contribute to the
pathogenesis of CD.
GEN   mouse Nod2 gene (Muridae): expression; mouse dbmt1 gene [mouse deleted in
       malignant ***brain*** tumor 1 gene] (Muridae): polymorphism,
       expression; mouse tnf gene [mouse tumor necrosis factor gene] (Muridae):
       expression; mouse Il6 gene [mouse. . .

L28   ANSWER 2 OF 22 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
AN   2007:421389 BIOSIS <<LOGINID::20090423>>
DN   PREV200700416637
TI   Genetic mapping in mice identifies ***DMBT1*** as a candidate modifier
       of mammary tumors and breast cancer risk.
AU   Blackburn, Anneke C.; Hill, Linda Z.; Roberts, Amy L.; Wang, Jun; Aud,
       Dee; Jung, Jimmy; Nikolcheva, Tania; Allard, John; Peltz, Gary; Otis,
       Christopher N.; Cao, Qing J.; Ricketts, Reva St. J.; Naber, Stephen P.;
       Mollenhauer, Jan; Poustka, Annemarie; Malamud, Daniel; Jerry, D. Joseph
       [Reprint Author]
CS   Univ Massachusetts, Dept Vet and Anim Sci, Paige Lab, 161 Holdsworth Way,
       Amherst, MA 01003 USA
       jjerry@vasci.umass.edu
SO   American Journal of Pathology, (JUN 2007) Vol. 170, No. 6, pp. 2030-2041.
       CODEN: AJPAA4. ISSN: 0002-9440.
DT   Article
LA   English
ED   Entered STN: 8 Aug 2007
       Last Updated on STN: 8 Aug 2007
AB   Low-penetrance breast cancer ***susceptibility*** alleles seem to play
       a significant role in breast cancer risk but are difficult to identify in
       human cohorts. A genetic screen of 176 N2 backcross progeny of two
       TrP53(+/-) strains, BALB/c and C57BL/6, which differ in their
          susceptibility to mammary tumors, identified a modifier of
mammary
       tumor ***susceptibility*** in an similar to 25-Mb interval on mouse
       chromosome 7 (designated SuprMam1). Relative to heterozygotes,
       homozygosity for BALB/c alleles of SuprMam1 significantly decreased
       mammary tumor latency from 70.7 to 61.1 weeks and increased risk twofold
       (P = 0.002).   ***Dmbt1*** (deleted in malignant ***brain*** tumors
       1) was identified as a candidate modifier gene within the SuprMam1
       interval because it was differentially expressed in mammary tissues from
       BALB/c-Trp53(+/-) and C57BL/6-TrP53(+/-) mice.   ***Dmbt1*** mRNA and
       protein was reduced in mammary glands of the ***susceptible*** BALB/c
       mice. Immunohistochemical staining demonstrated that ***DMBT1***
       protein expression was also significantly reduced in normal breast tissue
       from women with breast cancer (staining score, 1.8; n = 46) compared with
       cancer-free controls (staining score, 3.9; n = 53; P < 0.0001). These
       experiments demonstrate the use of Trp53(+/-) mice as a sensitized

background to screen for low-penetrance modifiers of cancer. The results
identify a novel mammary tumor ***susceptibility*** locus in mice and
support a role for ***DMBT1*** in suppression of inammary tumors in
both miceandwomen.
TI   Genetic mapping in mice identifies ***DMBT1*** as a candidate modifier
      of mammary tumors and breast cancer risk.
AB   Low-penetrance breast cancer ***susceptibility*** alleles seem to play
      a significant role in breast cancer risk but are difficult to identify in
      human cohorts. A genetic screen of 176 N2 backcross progeny of two
      TrP53(+/-) strains, BALB/c and C57BL/6, which differ in their
        susceptibility to mammary tumors, identified a modifier of
mammary
      tumor ***susceptibility*** in an similar to 25-Mb interval on mouse
      chromosome 7 (designated SuprMam1). Relative to heterozygotes,
      homozygosity for BALB/c alleles of SuprMam1 significantly decreased
      mammary tumor latency from 70.7 to 61.1 weeks and increased risk twofold
      (P = 0.002). ***Dmbt1*** (deleted in malignant ***brain*** tumors
      1) was identified as a candidate modifier gene within the SuprMam1
      interval because it was differentially expressed in mammary tissues from
      BALB/c-Trp53(+/-) and C57BL/6-TrP53(+/-) mice. ***Dmbt1*** mRNA and
      protein was reduced in mammary glands of the ***susceptible*** BALB/c
      mice. Immunohistochemical staining demonstrated that ***DMBT1***
      protein expression was also significantly reduced in normal breast tissue
      from women with breast cancer (staining score, 1.8; n =. . . Trp53(+/-)
      mice as a sensitized background to screen for low-penetrance modifiers of
      cancer. The results identify a novel mammary tumor ***susceptibility***
      locus in mice and support a role for ***DMBT1*** in suppression of
      inammary tumors in both miceandwomen.
GEN   mouse ***DMBT1*** gene [mouse deleted in malignant ***brain***
      tumor 1 gene] (Muridae): allele, locus, expression; mouse Trp53 gene
      (Muridae): locus

AN   2005:202251 BIOSIS <<LOGINID::20090423>>
DN   PREV200500210704
TI   Down-regulation of ***DMBT1*** gene expression in human oral squamous
      cell carcinoma.
AU   Imai, Massao Alberto; Moriya, Tetsuhiro; Ima, Fabiana Lica; Shiiba,
      Masashi; Bukawa, Hiroki; Yokoe, Hidetaka; Uzawa, Katsuhiro [Reprint
      Author]; Tanzawa, Hideki
CS   Grad Sch MedDept Clin Mol BiolChuo Ku, Chiba Univ, 1-8-1 Inohana, Chiba,
      2608670, Japan
      uzawak@faculty.chiba-u.jp
SO   International Journal of Molecular Medicine, (April 2005) Vol. 15, No. 4,
      pp. 585-589. print.
      ISSN: 1107-3756 (ISSN print).
DT   Article
LA   English
ED   Entered STN: 1 Jun 2005
      Last Updated on STN: 1 Jun 2005
AB   Deleted in malignant ***brain*** tumors 1 (***DMBT1***) gene was
      recently isolated on chromosome 10q25.3-26.1 and has been proposed as a
      putative candidate tumor suppressor for ***brain*** , esophageal,
      gastric, colorectal, and lung cancer. However, little is known about the
      association of ***DMBT1*** with oral squamous cell carcinoma (OSCC).
      To study the role of ***DMBT1*** gene in OSCC oncogenesis, we examined
      9 OSCC derived cell lines and 45 primary OSCC tissue specimens with

respective normal tissues. Semi-quantitative reverse transcriptase chain
reaction (RT-PCR) analysis revealed down-regulation or deletion of
   DMBT1   expression in all of the 9 cell lines and in IS (40%) of 45
primary OSCC tissues. Additionally, 57 OSCC tissue specimens were
examined by immunohistochemical staining of protein showing
down-regulation of   ***DMBT1***   protein in 31 (56.1%) of the 57 primary
OSCC tissue specimens. To assess restoration of   ***DMBT1***
expression by demethylation of promoter region, the 9 cell lines were
   treated   with 5-aza-2-deoxycytidine (5-Aza-C), one of the DNA
demethylating 7 agents. Six (66.7%) of 9 cell lines demonstrated
restoration of   ***DMBT1***   expression after 5-Aza-C   ***treatment***
. These results suggest that   ***DMBT1***   gene is involved in OSCC
oncogenesis and/or progression and that methylation of promoter region is
one of the important mechanisms suppressing the   ***DMBT1***   gene
expression.

TI   Down-regulation of   ***DMBT1***   gene expression in human oral squamous
      cell carcinoma.

AB   Deleted in malignant   ***brain***   tumors 1 (***DMBT1***   ) gene was
      recently isolated on chromosome 10q25.3-26.1 and has been proposed as a
      putative candidate tumor suppressor for   ***brain***   , esophageal,
      gastric, colorectal, and lung cancer. However, little is known about the
      association of   ***DMBT1***   with oral squamous cell carcinoma (OSCC).
      To study the role of   ***DMBT1***   gene in OSCC oncogenesis, we examined
      9 OSCC derived cell lines and 45 primary OSCC tissue specimens with
      respective normal tissues. Semi-quantitative reverse transcriptase chain
      reaction (RT-PCR) analysis revealed down-regulation or deletion of
         DMBT1   expression in all of the 9 cell lines and in IS (40%) of 45
      primary OSCC tissues. Additionally, 57 OSCC tissue specimens were
      examined by immunohistochemical staining of protein showing
      down-regulation of   ***DMBT1***   protein in 31 (56.1%) of the 57 primary
      OSCC tissue specimens. To assess restoration of   ***DMBT1***
      expression by demethylation of promoter region, the 9 cell lines were
         treated   with 5-aza-2-deoxycytidine (5-Aza-C), one of the DNA
      demethylating 7 agents. Six (66.7%) of 9 cell lines demonstrated
      restoration of   ***DMBT1***   expression after 5-Aza-C   ***treatment***
      . These results suggest that   ***DMBT1***   gene is involved in OSCC
      oncogenesis and/or progression and that methylation of promoter region is
      one of the important mechanisms suppressing the   ***DMBT1***   gene
      expression.

IT   . . .
      (Biochemistry and Molecular Biophysics); Oncology (Human Medicine,
      Medical Sciences)

IT   Parts, Structures, & Systems of Organisms
      chromosome 10q25.3-26.1

IT   Diseases
            brain   cancer: neoplastic disease, nervous system disease
            Brain   Neoplasms (MeSH)

IT   Diseases
      colorectal cancer: digestive system disease, neoplastic disease
      Colorectal Neoplasms (MeSH)

IT   Diseases
      esophageal cancer: digestive system disease,. . .
      cell carcinoma: dental and oral disease, neoplastic disease, genetics
      Mouth Neoplasms (MeSH); Carcinoma, Squamous Cell (MeSH)

IT   Chemicals & Biochemicals
      5-aza-2-deoxycytidine;   ***DMBT1***   protein: expression; DNA

GEN   human   ***DMBT1***   gene [human deleted in malianant   ***brain***

L28   ANSWER 4 OF 22   BIOSIS   COPYRIGHT (c) 2009 The Thomson Corporation   on STN
AN   2005:185524   BIOSIS <<LOGINID::20090423>>
DN   PREV200500184920
TI   The putative tumor suppressor deleted in malignant   ***brain***   tumors
      1 is an estrogen-regulated gene in rodent and primate endometrial
      epithelium.
AU   Tynan, Sharon; Pacia, Emmanuel; Haynes-Johnson, Donna; Lawrence, Danielle;
      D'Andrea, Michael R.; Guo, Jian-Zhong; Lundeen, Scott; Allan, George
      [Reprint Author]
CS   Reprod Therapeut, Johnson and Johnson Pharmaceut res and Dev LLC, Room
      B-115,1000 US Route 202 S,POB 300, Raritan, NJ, 08869, USA
      gallan@prdus.jnj.com
SO   Endocrinology, (March 2005) Vol. 146, No. 3, pp. 1066-1073. print.
      CODEN: ENDOAO. ISSN: 0013-7227.
DT   Article
LA   English
ED   Entered STN: 18 May 2005
      Last Updated on STN: 18 May 2005
AB   Deleted in malignant   ***brain***   tumors 1 (***DMBT1***   ) is a
      candidate suppressor of malignancies of the   ***brain***   , lung, gut,
      and breast. We have been studying gene expression in the uterus in the
      presence of estrogens and their antagonists. Here, we show that
       DMBT1   RNA levels are robustly increased by estrogen
       treatment   in the uteri of ovariectomized monkeys and rats. In
      monkeys, the progestin antagonist mifepristone inhibits estrogen-dependent
      uterine proliferation. As determined by a microarray experiment and
      quantitative analysis of RNA levels, mifepristone inhibited estrogenic
      induction of   ***DMBT1***   .   ***DMBT1***   was not expressed in intact
      monkeys that were   ***treated***   with a gonadotropin agonist to
      suppress steroidogenesis. An in vitro transfection study with human
       DMBT1   promoter constructs showed that an Alu site approximately
      3000 nucleotides upstream of the gene mediates estrogenic regulation.
      Surprisingly, the estrogen antagonists tamoxifen, raloxifene, and ICI
      182,780 also induced gene expression via this Alu site. Rodents represent
      a more convenient model system for studying uterine biology than monkeys.
      In rats, uterine   ***DMBT1***   RNA levels were dramatically up-regulated
      by estrogen. Consistent with the transfection study, tamoxifen and
      raloxifene increased   ***DMBT1***   RNA levels in vivo, but ICI 182,780
      inhibited an estrogen-induced increase. Immunohistochemical studies
      showed that   ***DMBT1***   is specifically induced in glandular and
      luminal epithelia of the rat endometrium. Our experiments establish that
       DMBT1   is an estrogen-responsive gene with a possible role in
      endometrial proliferation or differentiation, and they have implications
      for the putative tumor suppressive and mucosal protective functions of
       DMBT1   in the uterus.
TI   The putative tumor suppressor deleted in malignant   ***brain***   tumors
      1 is an estrogen-regulated gene in rodent and primate endometrial
      epithelium.
AB   Deleted in malignant   ***brain***   tumors 1 (***DMBT1***   ) is a
      candidate suppressor of malignancies of the   ***brain***   , lung, gut,
      and breast. We have been studying gene expression in the uterus in the
      presence of estrogens and their antagonists. Here, we show that
       DMBT1   RNA levels are robustly increased by estrogen
       treatment   in the uteri of ovariectomized monkeys and rats. In
      monkeys, the progestin antagonist mifepristone inhibits estrogen-dependent

uterine proliferation. As determined by a microarray experiment and
quantitative analysis of RNA levels, mifepristone inhibited estrogenic
induction of   ***DMBT1*** .   ***DMBT1***   was not expressed in intact
monkeys that were   ***treated***   with a gonadotropin agonist to
suppress steroidogenesis. An in vitro transfection study with human
   DMBT1   promoter constructs showed that an Alu site approximately
3000 nucleotides upstream of the gene mediates estrogenic regulation.
Surprisingly, the estrogen. . . via this Alu site. Rodents represent a
more convenient model system for studying uterine biology than monkeys.
In rats, uterine   ***DMBT1***   RNA levels were dramatically up-regulated
by estrogen. Consistent with the transfection study, tamoxifen and
raloxifene increased   ***DMBT1***   RNA levels in vivo, but ICI 182,780
inhibited an estrogen-induced increase. Immunohistochemical studies
showed that   ***DMBT1***   is specifically induced in glandular and
luminal epithelia of the rat endometrium. Our experiments establish that
   DMBT1   is an estrogen-responsive gene with a possible role in
endometrial proliferation or differentiation, and they have implications
for the putative tumor suppressive and mucosal protective functions of
   DMBT1   in the uterus.
IT   . . .
       (Chemical Coordination and Homeostasis); Molecular Genetics
       (Biochemistry and Molecular Biophysics); Pharmacology; Tumor Biology
IT   Parts, Structures, & Systems of Organisms
          brain : nervous system; breast: reproductive system; gut:
       digestive system; lung: respiratory system; uterus: reproductive system
IT   Diseases
          brain   tumors: neoplastic disease, nervous system disease
          Brain   Neoplasms (MeSH)
IT   Chemicals & Biochemicals
       ICI 182,780: antiestrogen-drug, hormone-drug, pharmacodynamics; RNA;
       estrogens; mifepristone: antiestrogen-drug, hormone-drug,
       pharmacodynamics; raloxifene: antiestrogen-drug, hormone-drug,. . .
GEN rat deleted in malignant   ***brain***   tumors-1 gene [rat   ***DMBT1***
     ] (Muridae)

L28 ANSWER 5 OF 22 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
AN   2004:439268 BIOSIS <<LOGINID::20090423>>
DN   PREV200400438312
TI   Homozygous deletion and expression of PTEN and   ***DMBT1***   in human
     primary neuroblastoma and cell lines.
AU   Munoz, Jorge; Lazcoz, Paula; del Mar Inda, Maria; Nistal, Manuel; Pestana,
     Angel; Encio, Ignacio J.; Castresana, Javier S. [Reprint Author]
CS   Lab Neurooncol MolFac MedDept Genet, Univ Navarra, E-31080, Pamplona,
     Spain
     jscastresana@unav.es
SO   International Journal of Cancer, (May 1 2004) Vol. 109, No. 5, pp.
     673-679. print.
     CODEN: IJCNAW. ISSN: 0020-7136.
DT   Article
LA   English
ED   Entered STN: 17 Nov 2004
     Last Updated on STN: 17 Nov 2004
AB   Neuroblastoma is the most common pediatric solid tumor. Although many
     allelic imbalances have been described, a bona fide tumor suppressor gene
     for this disease has not been found yet. In our study, we analyzed 2
     genes, PTEN and   ***DMBTI*** , mapping 10q23.31 and 10q25.3-26.1,
     respectively, which have been found frequently altered in other kinds of

neoplasms. We screened both genes for homozygous deletions in 45 primary
neuroblastic tumors and 12 neuroblastoma cell lines. Expression of these
genes in cell lines was assessed by RT-PCR analysis. We could detect 2 of
41 (5%) primary tumors harboring PTEN homozygous deletions. Three of 41
(7%) primary tumors and 2 of 12 cell lines presented homozygous losses at
the g14 STS on the   ***DMBTI***   locus. All cell lines analyzed
expressed PTEN, but lack of   ***DMBTI***   mRNA expression was detected
in 2 of them. We tried to see whether epigenetic mechanisms, such as
aberrant promoter hypermethylation, had any role in   ***DMBTI***
silencing. The 2 cell lines lacking   ***DMBTI***   expression were
  treated   with 5-aza-2'-deoxycytidine;   ***DMBTI***   expression
was restored in only one of them (MC-IXC). From our work, we can conclude
that PTEN and   ***DMBTI***   seem to contribute to the development of a
small fraction of neuroblastomas, and that promoter hypermethylation might
have a role in   ***DMBTI***   gene silencing. Copyright 2004 Wiley-Liss,
Inc.
TI   Homozygous deletion and expression of PTEN and   ***DMBT1***   in human
primary neuroblastoma and cell lines.
AB.   . . tumor suppressor gene for this disease has not been found yet. In
our study, we analyzed 2 genes, PTEN and   ***DMBTI***   , mapping 10q23.31
and 10q25.3-26.1, respectively, which have been found frequently altered
in other kinds of neoplasms. We screened both genes. . . of 41 (7%)
primary tumors and 2 of 12 cell lines presented homozygous losses at the
g14 STS on the   ***DMBTI***   locus. All cell lines analyzed expressed
PTEN, but lack of   ***DMBTI***   mRNA expression was detected in 2 of
them. We tried to see whether epigenetic mechanisms, such as aberrant
promoter hypermethylation, had any role in   ***DMBTI***   silencing. The
2 cell lines lacking   ***DMBTI***   expression were   ***treated***
with 5-aza-2'-deoxycytidine;   ***DMBTI***   expression was restored in
only one of them (MC-IXC). From our work, we can conclude that PTEN and
  DMBTI   seem to contribute to the development of a small fraction
of
neuroblastomas, and that promoter hypermethylation might have a role in
  DMBTI   gene silencing. Copyright 2004 Wiley-Liss, Inc.
IT   . . .
chromosome 10, q23.31, q25.3-26.1; primary tumors, pediatric
IT   Diseases
neuroblastoma: neoplastic disease, nervous system disease, diagnosis,
epidemiology, etiology, genetics, pathology,   ***prevention***   and
control, symptom
Neuroblastoma (MeSH)
IT   Chemicals & Biochemicals
deleted in malignant   ***brain***   tumors-1 locus [***DMBT1***
locus]: g14 sequence-tagged site; m-RNA [messenger RNA]: expression
IT   Methods & Equipment
5-aza-2'-deoxycytidine   ***treatment***   : laboratory techniques; gene
analysis: genetic techniques, laboratory techniques; gene mapping:
genetic techniques, laboratory techniques; gene screening: genetic
techniques, laboratory techniques; primary neuroblastic tumors:
laboratory equipment; real time-polymerase chain reaction analysis
[RT-PCR analysis]: genetic techniques, laboratory techniques
IT   Miscellaneous Descriptors
  DMBTI   gene silencing; aberrant promoter hypermethylation:
epigenetic mechanism, role; homozygous deletions
GEN   human   ***DMBTI***   gene (Hominidae): expression, silencing; human PTEN
gene (Hominidae): expression

AN   2004:221390 BIOSIS <<LOGINID::20090423>>
DN   PREV200400224388
TI   Site-characteristic expression and induction of trefoil factor family 1, 2
      and 3 and malignant ***brain*** tumor-1 in normal and diseased
      intrahepatic bile ducts relates to biliary pathophysiology.
AU   Sasaki, Motoko; Tsuneyama, Koichi; Saito, Takahito; Kataoka, Hiroaki;
      Mollenhauer, Jan; Poustka, Annemarie; Nakanuma, Yasuni [Reprint Author]
CS   Department of Human Pathology, Kanazawa University Graduate School of
      Medicine, Kanazawa, 920-8640, Japan
SO   Liver International, (February 2004) Vol. 24, No. 1, pp. 29-37. print.
      ISSN: 1478-3223 (ISSN print).
DT   Article
LA   English
ED   Entered STN: 21 Apr 2004
      Last Updated on STN: 21 Apr 2004
AB   Background/Aim: Trefoil factor family (TFF)1,2,3 are involved in a
      homeostasis/repair process of mucosal epithelia. In this study, the
      significance of TFF family and deleted in the malignant ***brain***
      tumor-1 (***DMBT1***), a putative receptor of TFF2, in the
      intrahepatic biliary tree was investigated in normal and diseased livers.
      Materials and Methods: Expression of TFF1,2,3 and ***DMBT1*** were
      examined immunohistochemically in primary biliary cirrhosis (PBC), primary
      sclerosing cholangitis (PSC), chronic viral hepatitis (CVH), extrahepatic
      biliary obstruction (EBO), and normal livers. Results: In normal livers,
      TFF1,3 and ***DMBT1*** were infrequently detectable in large and
      rarely in small bile ducts, respectively. TFF2 was not detectable in
      large bile ducts. In large bile duct diseases (PSC and EBO), expression
      of TFF3 and ***DMBT1*** were increased. In small bile duct diseases
      (PBC and CVH), expression of TFF2/ ***DMBT1*** was induced in
      moderately to severely damaged ducts irrespective of etiology.
      Conclusion: The intrahepatic biliary tree shows a site-characteristic
      expression and induction of TFF1,2,3 and ***DMBT1*** . In large bile
      ducts, TFF1,3 were constitutively expressed and increased in pathologic
      bile ducts. In small bile ducts, TFF2/ ***DMBT1*** is induced in
      damaged ducts irrespective of etiologies. However, the
      cytoprotective/repair property of TFF2/ ***DMBT1*** may not be enough
      to ***prevent*** the following bile duct loss in PBC.
TI   Site-characteristic expression and induction of trefoil factor family 1, 2
      and 3 and malignant ***brain*** tumor-1 in normal and diseased
      intrahepatic bile ducts relates to biliary pathophysiology.
AB.   . . in a homeostasis/repair process of mucosal epithelia. In this
      study, the significance of TFF family and deleted in the malignant
       brain tumor-1 (***DMBT1***), a putative receptor of TFF2, in
      the intrahepatic biliary tree was investigated in normal and diseased
      livers. Materials and Methods: Expression of TFF1,2,3 and ***DMBT1***
      were examined immunohistochemically in primary biliary cirrhosis (PBC),
      primary sclerosing cholangitis (PSC), chronic viral hepatitis (CVH),
      extrahepatic biliary obstruction (EBO), and normal livers. Results: In
      normal livers, TFF1,3 and ***DMBT1*** were infrequently detectable in
      large and rarely in small bile ducts, respectively. TFF2 was not
      detectable in large bile ducts. In large bile duct diseases (PSC and
      EBO), expression of TFF3 and ***DMBT1*** were increased. In small
      bile duct diseases (PBC and CVH), expression of TFF2/ ***DMBT1*** was
      induced in moderately to severely damaged ducts irrespective of etiology.
      Conclusion: The intrahepatic biliary tree shows a site-characteristic
      expression and induction of TFF1,2,3 and ***DMBT1*** . In large bile

ducts, TFF1,3 were constitutively expressed and increased in pathologic
bile ducts. In small bile ducts, TFF2/ ***DMBT1*** is induced in
damaged ducts irrespective of etiologies. However, the
cytoprotective/repair property of TFF2/ ***DMBT1*** may not be enough
to ***prevent*** the following bile duct loss in PBC.
IT   . . .
      Biliary (MeSH)
IT   Diseases
     primary sclerosing cholangitis: digestive system disease
     Cholangitis, Sclerosing (MeSH)
IT   Chemicals & Biochemicals
     deleted in the malignant ***brain*** tumor-1 [***DMBT1***]:
     expression, regulation; trefoil factor family 1: expression,
     regulation; trefoil factor family 2: expression, regulation; trefoil
     factor family 3: expression, regulation

AN   2000:69895 BIOSIS <<LOGINID::20090423>>
DN   PREV200000069895
TI   The genomic structure of the ***DMBT1*** gene: Evidence for a region
      with ***susceptibility*** to genomic instability.
AU   Mollenhauer, J. [Reprint author]; Holmskov, U.; Wiemann, S.; Krebs, I.;
      Herbertz, S.; Madsen, J.; Kioschis, P.; Coy, J. F.; Poustka, A.
CS   Department of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
      Im Neuenheimer Feld 280, 69120, Heidelberg, Germany
SO   Oncogene, (Nov. 4, 1999) Vol. 18, No. 46, pp. 6233-6240. print.
      CODEN: ONCNES. ISSN: 0950-9232.
DT   Article
LA   English
ED   Entered STN: 9 Feb 2000
      Last Updated on STN: 3 Jan 2002
AB   Increasing evidence has accumulated for an involvement of the inactivation
      of tumour suppressor genes at chromosome 10q in the carcinogenesis of
       brain tumours, melanomas, and carcinomas of the lung, the
      prostate, the pancreas, and the endometrium. The gene ***DMBT1***
      (Deleted in Malignant ***Brain*** Tumours 1) is located at chromosome
      10q25.3-q26.1, within one of the putative intervals for tumour suppressor
      genes. ***DMBT1*** is a member of the scavenger-receptor
      cysteine-rich (SRCR) superfamily and displays homozygous deletions or lack
      of expression in glioblastoma multiforme, medulloblastoma, and in
      gastrointestinal and lung cancers. Based on these properties,
       DMBT1 has been proposed to be a candidate tumour suppressor gene.
      We have determined the genomic sequence of ***DMBT1*** to allow
      analyses of mutations. The gene has at least 54 exons that span a genomic
      region of about 80 kb. We have identified a putative exon with coding
      potential for a transmembrane domain. Our data further suggest that
      alternative splicing gives rise to isoforms of ***DMBT1*** with a
      differential utilization of SRCR domains and SRCR interspersed domains.
      The major part of the gene harbours locus specific repeats. These repeats
      may point to the ***DMBT1*** locus as a region ***susceptible***
      to chromosomal instability.
TI   The genomic structure of the ***DMBT1*** gene: Evidence for a region
      with ***susceptibility*** to genomic instability.
AB.   . . evidence has accumulated for an involvement of the inactivation of
      tumour suppressor genes at chromosome 10q in the carcinogenesis of
       brain tumours, melanomas, and carcinomas of the lung, the
      prostate, the pancreas, and the endometrium. The gene ***DMBT1***

(Deleted in Malignant ***Brain*** Tumours 1) is located at chromosome
10q25.3-q26.1, within one of the putative intervals for tumour suppressor
genes. ***DMBT1*** is a member of the scavenger-receptor
cysteine-rich (SRCR) superfamily and displays homozygous deletions or lack
of expression in glioblastoma multiforme, medulloblastoma, and in
gastrointestinal and lung cancers. Based on these properties,
  DMBT1 has been proposed to be a candidate tumour suppressor gene.
We have determined the genomic sequence of ***DMBT1*** to allow
analyses of mutations. The gene has at least 54 exons that span a genomic
region of about 80. . . exon with coding potential for a transmembrane
domain. Our data further suggest that alternative splicing gives rise to
isoforms of ***DMBT1*** with a differential utilization of SRCR
domains and SRCR interspersed domains. The major part of the gene
harbours locus specific repeats. These repeats may point to the
  DMBT1 locus as a region ***susceptible*** to chromosomal
instability.
IT   . . .
      Neoplasms (MeSH)
IT   Diseases
      medulloblastoma: neoplastic disease, nervous system disease, tumor
      development
      Medulloblastoma (MeSH)
IT   Chemicals & Biochemicals
      deleted in malignant ***brain*** tumors 1 gene [***DMBT*** -1
      gene]: genomic instability region evidence, genomic structure,
      nucleotide sequence, tumor development role, tumor expression

L28 ANSWER 8 OF 22 CAPLUS COPYRIGHT 2009 ACS on STN
AN   2007:1064219 CAPLUS <<LOGINID::20090423>>
DN   147:383999
TI   Detection of gene expression by specific cell types in mixed samples or
      tissues such as mouse thymus cortex or medullary stromal cells using DGEM
      (differential gene expression mapping)
IN   Petrie, Howard T.
PA   USA
SO   PCT Int. Appl., 257pp.
      CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
      PATENT NO.   KIND   DATE   APPLICATION NO.   DATE
      ---------------   ----   --------   --------------------   --------
PI   WO 2007106507   A2   20070920   WO 2007-US6363   20070314
      WO 2007106507   A3   20090205
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN,
             KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN,
             MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS,
             RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
        RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
            IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF,
            BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW,
            GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
            BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
PRAI US 2006-782124P   P   20060314

AB   Differential gene expression mapping (DGEM) utilizes (1) laser capture
      microdissection or other methods of microdissection of the tissue regions
      of interest; (2) microarray screening of RNA isolated from the
      microdissected regions and anal. of purified individual cellular
      components from the tissue; and (3) computational profiling or subtraction
      to identify gene expression by specific cell types in situ. The method
      was applied to stromal cells from whole cortical and medullary regions of
      C57BL6 mouse thymus. As a result, DGEM, a reverse identification
      approach, solves previously insurmountable problems, as the lymphoid
      progenitors can be readily isolated, allowing fluctuations in receptor
      expression on lymphoid cells to be used to predict stratified stromal
      signals. An algorithmic approach can be used for calcg. the expression
      profile of a tissue/sample of interest that consists of at least two types
      of cells. Specifically, the approach electronically subtracts the
      expression profile of one component of a sample from the expression
      profile of the total sample, thus revealing the profiles of the other
      component. To confirm the robustness of the DGEM procedure, the gene
      expression profiles from each sample of whole medulla, whole cortex,
      cortical thymocytes and medullary thymocytes was sorted based only on the
      expression data.
IT   Proteins
      RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL
      (Biological study); USES (Uses)
         (Bicaudal   ***C***   homolog 1; detection of gene expression by
         stromal cells in mouse thymus cortex or medullary stromal cells using
         DGEM (differential gene expression mapping))
IT   Interleukin   ***17***   receptors
      RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL
      (Biological study); USES (Uses)
         (C; detection of gene expression by stromal cells in mouse thymus
         cortex or medullary stromal cells using DGEM (differential gene
         expression mapping))
IT   Proteins
      RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL
      (Biological study); USES (Uses)
         (***CAAX***   box I homolog C; detection of gene expression by
         stromal cells in mouse thymus cortex or medullary stromal cells using
         DGEM (differential gene expression mapping))
IT   Proteins
      RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL
      (Biological study); USES (Uses)
         (***CABLES1***   (Cdk5 and Abl enzyme substrate 1); detection of gene
         expression by stromal cells in mouse thymus cortex or medullary stromal
         cells using DGEM (differential gene expression mapping))
IT   Proteins
      RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL
      (Biological study); USES (Uses)
         (***CAP***   (adenylate cyclase-assocd. protein); detection of gene
         expression by stromal cells in mouse thymus cortex or medullary stromal
         cells using DGEM (differential gene expression mapping))
IT   Proteins
      RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL
      (Biological study); USES (Uses)
         (***DMBT1***   ; detection of gene expression by specific cell types
         in mixed samples or tissues using DGEM (differential gene expression
         mapping))
IT   ***Proteins***

```
        RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL
        (Biological study); USES (Uses)
            (EPS (epidermal growth factor receptor pathway substrate); detection of
            gene expression by stromal cells in mouse thymus cortex or medullary
            stromal cells using DGEM (differential gene expression mapping))
    IT   Proteins
        RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL
        (Biological study); USES (Uses)
            (Friend virus   ***susceptibility***   4; detection of gene expression
            by stromal cells in mouse thymus cortex or medullary stromal cells
            using DGEM (differential gene expression mapping))
    IT   Proteins
        RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL
        (Biological study); USES (Uses)
            (Ras homolog enriched in   ***brain***   -like 1; detection of gene
            expression by stromal cells in mouse thymus cortex or medullary stromal
            cells using DGEM (differential gene expression mapping))

L28  ANSWER 9 OF 22  CAPLUS  COPYRIGHT 2009 ACS on STN
AN   2007:117791  CAPLUS <<LOGINID::20090423>>
DN   146:203915
TI   Gene expression profile for diagnosing small cell lung cancer,
     discriminating from non-small cell lung cancer, and assessing
     chemotherapy-resistant lung cancer
IN   Nakamura, Yusuke; Daigo, Yataro; Nakatsuru, Shuichi
PA   Oncotherapy Science, Inc., Japan; The University of Tokyo
SO   PCT Int. Appl., 215pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
PI   WO 2007013665        A2     20070201    WO 2006-JP315254        20060726
     WO 2007013665        A3     20070705
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
             KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN,
             MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU,
             SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG,
             US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
     EP 1907581           A2     20080409    EP 2006-782127          20060726
         R:  AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR
     JP 2009502115         T      20090129    JP 2008-503310          20060726
     CN 101283106          A      20081008    CN 2006-80035744        20080327
PRAI US 2005-703192P       P      20050727
     US 2006-799961P       P      20060511
     WO 2006-JP315254      W      20060726
AB   Methods for detecting and diagnosing small cell lung cancer (SCLC) are
     described.  In one embodiment, the diagnostic method involves detg. the
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expression level of an SCLC-assocd. gene that discriminates between SCLC
cells and normal cells. In another embodiment, the diagnostic method
involves detg. the expression level of an SCLC-assocd. gene that
distinguishes two major histol. types of lung cancer, i.e., non-small cell
lung cancer (NSCLC) and SCLC. Finally, the present invention provides
methods of screening for therapeutic agents useful in the
   treatment   of small cell lung cancer, methods of   ***treating***
small cell lung cancer, and methods for vaccinating a subject against
small cell lung cancer. Furthermore, the present invention provides
chemotherapy-resistant lung cancer- or SCLC-assocd. genes as diagnostic
markers and/or mol. targets for therapeutic agent for these cancers.
These genes are up-regulated in chemoresistant lung cancer or SCLC.
Accordingly, chemoresistant lung cancer or SCLC can be predicted using
expression level of the genes as diagnostic markers. As the result, any
adverse effects caused by ineffective chemotherapy can be avoided, and
more suitable and effective therapeutic strategy can be selected.
AB   . . .   cell lung cancer (NSCLC) and SCLC. Finally, the present
invention provides methods of screening for therapeutic agents useful in
the   ***treatment***   of small cell lung cancer, methods of
   treating   small cell lung cancer, and methods for vaccinating a
subject against small cell lung cancer. Furthermore, the present
invention provides. . .
IT   Proteins
     RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); PRP
     (Properties); BIOL (Biological study); USES (Uses)
       (***DMBT1***   , gene for, diagnosis of lung cancer; gene expression
       profile for diagnosing and discriminating small cell lung cancer and
       assessing chemotherapy-resistant lung cancer)
IT   Proteins
     RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); PRP
     (Properties); BIOL (Biological study); USES (Uses)
       (autism   ***susceptibility***   candidate 2, gene for, diagnosis of
       lung cancer; gene expression profile for diagnosing and discriminating
       small cell lung cancer and assessing chemotherapy-resistant lung
       cancer)
IT   Angiogenic factors
     RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); PRP
     (Properties); BIOL (Biological study); USES (Uses)
       (***brain***   specific angiogenesis inhibitor, 3, gene for,
       diagnosis of lung cancer; gene expression profile for diagnosing and
       discriminating small cell lung cancer and assessing
       chemotherapy-resistant lung cancer)
IT   Proteins
     RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); PRP
     (Properties); BIOL (Biological study); USES (Uses)
       (cancer   ***susceptibility***   candidate 5, gene for, diagnosis of
       lung cancer; gene expression profile for diagnosing and discriminating
       small cell lung cancer and assessing chemotherapy-resistant lung
       cancer)
IT   Antigens
     RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); PRP
     (Properties); BIOL (Biological study); USES (Uses)
       (lupus   ***brain***   antigen 1, gene for, diagnosis of lung cancer;
       gene expression profile for diagnosing and discriminating small cell
       lung cancer and assessing chemotherapy-resistant lung cancer)

AN   2005:1292937 CAPLUS <<LOGINID::20090423>>
DN   145:21938
TI   Genetic analysis of human glioblastomas using a genomic microarray system
AU   Suzuki, Tsuyoshi; Maruno, Motohiko; Wada, Kouichi; Kagawa, Naoki;
      Fujimoto, Yasunori; Hashimoto, Naoya; Izumoto, Shuichi; Yoshimine, Toshiki
CS   Department of Neurosurgery, Osaka University Graduate School of Medicine,
      2-2 Yamadaoka, Suita, Osaka, 565-0871, Japan
SO   Brain Tumor Pathology (2004), 21(1), 27-34
      CODEN: BTPAFM; ISSN: 1433-7398
PB   Springer Tokyo
DT   Journal
LA   English

AB   Genomic microarray systems can simultaneously provide substantial genetic
      and chromosomal information in a relatively short time. We have analyzed
      genomic DNA from frozen sections of 30 cases of primary glioblastomas by
      GenoSensor Array 300 in order to characterize gene amplifications, gene
      deletions, and chromosomal information in the whole genome. Genes that
      were frequently amplified included RFC2/CYLN2 (63.3%), EGFR (53.3%), IL6
      (53.3%), ABCB1 (MDR1) (36.7%), and PDGFRA (26.7%). Genes that were
      frequently deleted included FGFR2 (66.7%), MTAP (60.0%),   ***DMBT1***
      (56.7%), CDKN2A (p16)/MTAP (50.0%), PIK3CA (43.3%), and EGR2 (43.3%), but
      deletion of RB1 or TP53 was rarely detected. Chromosomal gains were obsd.
      frequently for 7q (33.3%), 7p (20.0%), and 17q (13.3%). Loss of the 10q
      was frequently detected in 13 of 30 cases (46.7%). Loss of the entire
      chromosome 10 was seen in 9 of 30 cases (30.0%), and was often accompanied
      by EGFR amplification (7 cases, 77.8%). The GenoSensor Array 300 proved
      to be useful for identification of genome-wide mol. changes in
      glioblastomas. The obtained microarray profile can also yield valuable
      insight into the mol. events underlying carcinogenesis of   ***brain***
      tumors and may provide clues about clin. correlations, including response
      to   ***treatment*** .
RE.CNT 32   THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
AB   . . . EGFR (53.3%), IL6 (53.3%), ABCB1 (MDR1) (36.7%), and PDGFRA
      (26.7%). Genes that were frequently deleted included FGFR2 (66.7%), MTAP
      (60.0%),   ***DMBT1***   (56.7%), CDKN2A (p16)/MTAP (50.0%), PIK3CA
      (43.3%), and EGR2 (43.3%), but deletion of RB1 or TP53 was rarely
      detected. Chromosomal gains. . . mol. changes in glioblastomas. The
      obtained microarray profile can also yield valuable insight into the mol.
      events underlying carcinogenesis of   ***brain***   tumors and may provide
      clues about clin. correlations, including response to   ***treatment*** .
IT   Gene, animal
      RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (***DMBT1*** , deletion; genetic anal. of human glioblastomas using
        a genomic microarray system)

L28   ANSWER 11 OF 22 CAPLUS COPYRIGHT 2009 ACS on STN
AN   2005:1240544 CAPLUS <<LOGINID::20090423>>
DN   144:2843
TI   Method and kit for detecting components in a sample
IN   Ramael, Marc
PA   Belg.
SO   PCT Int. Appl., 76 pp.
      CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1

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      PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
      ---------------      ----   --------    --------------------    --------
PI    WO 2005111619        A1     20051124    WO 2004-EP4547           20040429
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
             SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
             SN, TD, TG
      EP 1740951           A1     20070110    EP 2004-730243           20040429
      EP 1740951           B1     20080305
         R:  AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
      JP 2007534948        T      20071129    JP 2007-509881           20040429
      AT 388404            T      20080315    AT 2004-730243           20040429
      US 20080269064       A1     20081030    US 2006-587710           20061026
PRAI  WO 2004-EP4547       W      20040429
AB    The present invention relates to methods and kit for use in the detection
      of a component in a sample on a solid support, comprising the use of a
      conjugate and polymer comprising metal particles of diam. in the nanometer
      range (i.e. between 0.1 and 500 nm).  It further relates to methods and
      kit for use in the detection of a component in a sample on a solid
      support, comprising the use of conjugate and optionally polymer bound to
      one or more supermagnetic particles.  It further relates to methods and
      kit for use in enhancing in vivo imaging and microscopy.  Microarrays were
      printed using specific oligonucleotides detecting HPV 16, HPV18, HPV 31,
      HPV 33, HPV 35, HPV 52 and HPV 58.  The hybridization assay was set up
      using PCR amplified HPV DNA.  During the PCR reaction, the amplification
      product was labeled using a biotin labeled primer.  Slides were visualized
      by  ***treatment***  with streptavidin labeled with gold particles
      ranging from 0.8 nm to 40 nm and signal amplification with dextran polymer
      or poly-L-lysine polymer coated with numerous biotin mols., anti-biotin
      antibody or streptavidin labeled with gold nanoparticles, and metal
      enhancement.  Hybridized microarrays showed areas with very sharp black or
      red colored spots in some areas depending on the used substrate.  Other
      areas did not show any signal.  Background signal was completely absent.
RE.CNT 6     THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT
AB    . . . HPV DNA.  During the PCR reaction, the amplification product was
      labeled using a biotin labeled primer.  Slides were visualized by
        ***treatment***  with streptavidin labeled with gold particles ranging
      from 0.8 nm to 40 nm and signal amplification with dextran polymer or.  .
      .
IT    Proteins
      RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         ( ***DMBT1***  ; kit and method using solid support, conjugate and
        polymer comprising metal particles for detecting components in samples)
IT    Neurotrophic factors
      RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         ( ***brain***  -derived; kit and method using solid support, conjugate
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        and polymer comprising metal particles for detecting components in
        samples)
IT   DNA microarray technology
     Diagnosis
     Environmental analysis
     Food analysis
     Human
     Imaging
     Immunohistochemistry
     Microscopy
     Nucleic acid hybridization
     PCR (polymerase chain reaction)
     Solids
     Staining, biological
        ***Susceptibility***    (genetic)
     Test kits
        (kit and method using solid support, conjugate and polymer comprising
        metal particles for detecting components in samples)

L28  ANSWER 12 OF 22  CAPLUS  COPYRIGHT 2009 ACS on STN
AN   2005:984188  CAPLUS  <<LOGINID::20090423>>
DN   143:284092
TI   Gene expression profiles for breast cancer prognostics
IN   Wang, Yixin
PA   Veridex, LLC, USA
SO   PCT Int. Appl., 76 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 2
     PATENT NO.          KIND   DATE       APPLICATION NO.          DATE
     --------------      ----   -------    --------------------     --------
PI   WO 2005083429       A2     20050909   WO 2005-US5711           20050218
     WO 2005083429       A3     20060713
        W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
            CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
            GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
            LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
            NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM,
            SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
        RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
            AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
            EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
            RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
            MR, NE, SN, TD, TG
     US 20050186577      A1     20050825   US 2004-783271           20040220
     CA 2556890          A1     20050909   CA 2005-2556890          20050218
     EP 1721159          A2     20061115   EP 2005-732080           20050218
        R:  AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
            IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA,
            HR, LV, MK, YU
     CN 1950701          A      20070418   CN 2005-80012425         20050218
     JP 2007528218       T      20071011   JP 2006-554314           20050218
     MX 2006009545       A      20070307   MX 2006-9545             20060821
PRAI US 2004-783271      A      20040220
     US 2004-634430P     P      20041208
     WO 2005-US5711      W      20050218
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AB   A method of providing a prognosis of breast cancer is conducted by
      analyzing the expression of a group of genes. Using Affymetrix Human
      U133a GeneChips, the expression of 22,000 transcripts was analyzed using
      total RNA of frozen tumor samples from 286 lymph node neg. (LNN) breast
      cancer patients of all age-groups and tumor sizes who did not receive
      adjuvant systemic   ***treatment*** . Genome-wide measures of gene
      expression identified patterns of gene activity that subclassify tumors
      and provide an improved means for individual risk assessment in patients
      with LNN breast cancer. A 76-gene signature is provided that accurately
      predicts distant tumor recurrence and is applicable to all LNN breast
      cancer patients independently of age, tumor size and grade, and estrogen
      receptor status. The signature shows 88% sensitivity and 41% specificity.
      Applying univariate Cox's regression anal. to the data to obtain selected
      genes, and applying weighted expression levels to the selected genes with
      std. Cox's coeffs. provide a prediction model that can be applied as a
      Relapse Hazard Score. Twenty-one pathways over-represented in the 76 gene
      signature were also found in all the other prognostic signatures,
      suggesting that common biol. pathways are involved in tumor recurrence.
RE.CNT 4   THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
AB   . . . 286 lymph node neg. (LNN) breast cancer patients of all
      age-groups and tumor sizes who did not receive adjuvant systemic
       treatment . Genome-wide measures of gene expression identified
      patterns of gene activity that subclassify tumors and provide an improved
      means for individual. . .
IT   Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); BIOL
      (Biological study); USES (Uses)
         (BAI3 (***brain*** -specific angiogenesis inhibitor 3); gene
         expression profiles for breast cancer prognostics)
IT   Gene, animal
      Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); BIOL
      (Biological study); USES (Uses)
         (***DMBT1*** ; gene expression profiles for breast cancer
         prognostics)
IT   Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); BIOL
      (Biological study); USES (Uses)
         (RHEB2 (Ras homolog enriched in   ***brain***   2); gene expression
         profiles for breast cancer prognostics)

L28   ANSWER 13 OF 22 CAPLUS COPYRIGHT 2009 ACS on STN
AN   2005:953991 CAPLUS <<LOGINID::20090423>>
DN   143:260332
TI   Use of   ***DMBT1***   protein for capturing sulfate and phosphate groups
      exposed in disease-associated agents
IN   Mollenhauer, Jan; End, Caroline; Blaich, Stephanie; Bergmann, Gaby;
      Renner, Marcus; Lyer, Stefan; Wittig, Rainer; Poustka, Annemarie; Bikker,
      Floris; Ligtenberg, Anton; Nieuw-Amerongen, Arie; Veerman, Enno
PA   Deutsches Krebsforschungszentrum Stiftung des Oeffentlichen Rechts,
      Germany
SO   Eur. Pat. Appl., 57 pp.
      CODEN: EPXXDW
DT   Patent
LA   English
FAN.CNT 1

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     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    --------------------   --------
PI   EP 1568374          A1     20050831    EP 2004-4281           20040225
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
     WO 2005079834       A1     20050901    WO 2005-EP1994         20050225
     WO 2005079834       A9     20051027
        W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
            CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
            GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
            LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
            NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
            TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
        RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
            AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
            EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
            RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
            MR, NE, SN, TD, TG
     EP 1727558          A1     20061206    EP 2005-732131         20050225
        R:  AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
            IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
     US 20080234185      A1     20080925    US 2006-590657         20060825
PRAI EP 2004-4281        A      20040225
     WO 2005-EP1994      W      20050225
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AB   Disclosed is the use of   ***DMBT1***   , or of the nucleic acid encoding
     it, for the manuf. of a medicament for the   ***treatment***   of a
     patient suffering from a disease caused by an agent which possesses at
     least one accessible sulfate and/or at least one accessible phosphate
     group.   ***DMBT1***   may also be used as a diagnostic for diagnosing
     the   ***susceptibility***   of an individual to sulfate or phosphate
     groups, as well in methods for diagnosis, prophylaxis or   ***treatment***
     of diseases caused by an agent which possesses at least one accessible
     sulfate and/or at least one accessible phosphate group. The invention is
     based on the discovery that human protein   ***DMBT1***   (Deleted in
     Malignant   ***Brain***   Tumors 1) is a dual-specific pattern recognition
     receptor for non-self (bacterial cell wall components, gp120 of HIV,
     damage-, inflammation-, and cancer-causing sulfated carbohydrates) and
     self structures (DNA, phospholipids, cell surface and extracellular matrix
     carbohydrates), which interacts with accessible sulfate and or phosphate
     groups, which are present on numerous compds., compns., and organisms.
     Pattern recognition of   ***DMBT1***   is mediated via an 11-amino acid
     motif (GRVEVLYRGSW) that binds sulfate and phosphate groups. By acting as
     a dual-specific PRR,   ***DMBT1***   may exert a general insulator
     function against a broad range of pathogens, which predicts a contribution
     of   ***DMBT1***   germline deletions to human   ***susceptibility***   to
     infection, inflammation, and cancer. Furthermore, a 40% decreased level
     of   ***DMBT1***   in male mice correlates with an increased
       susceptibility   and with a deficient protection against dextran
     sulfate sodium-induced tissue damage and inflammation in the colon.
RE.CNT 7   THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
            ALL CITATIONS AVAILABLE IN THE RE FORMAT
TI   Use of   ***DMBT1***   protein for capturing sulfate and phosphate groups
     exposed in disease-associated agents
AB   Disclosed is the use of   ***DMBT1***   , or of the nucleic acid encoding
     it, for the manuf. of a medicament for the   ***treatment***   of a
     patient suffering from a disease caused by an agent which possesses at
     least one accessible sulfate and/or at least one accessible phosphate

group.   ***DMBT1***   may also be used as a diagnostic for diagnosing
the ***susceptibility***   of an individual to sulfate or phosphate
groups, as well in methods for diagnosis, prophylaxis or   ***treatment***
of diseases caused by an agent which possesses at least one accessible
sulfate and/or at least one accessible phosphate group. The invention is
based on the discovery that human protein   ***DMBT1***   (Deleted in
Malignant   ***Brain***   Tumors 1) is a dual-specific pattern recognition
receptor for non-self (bacterial cell wall components, gp120 of HIV,
damage-, inflammation-, and. . . interacts with accessible sulfate and
or phosphate groups, which are present on numerous compds., compns., and
organisms. Pattern recognition of   ***DMBT1***   is mediated via an
11-amino acid motif (GRVEVLYRGSW) that binds sulfate and phosphate groups.
By acting as a dual-specific PRR,   ***DMBT1***   may exert a general
insulator function against a broad range of pathogens, which predicts a
contribution of   ***DMBT1***   germline deletions to human
 susceptibility   to infection, inflammation, and cancer.
Furthermore, a 40% decreased level of   ***DMBT1***   in male mice
correlates with an increased   ***susceptibility***   and with a deficient
protection against dextran sulfate sodium-induced tissue damage and
inflammation in the colon.

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ST    ***DMBT1***   protein phosphate sulfate group capture; diagnosis
      ***DMBT1***   protein phosphate sulfate group; infection therapy
      ***DMBT1***   protein phosphate sulfate group; inflammation therapy
      ***DMBT1***   protein phosphate sulfate group; cancer therapy
      ***DMBT1***   protein phosphate sulfate group
IT    Proteins
      RL: BSU (Biological study, unclassified); PRP (Properties); THU
      (Therapeutic use); BIOL (Biological study); USES (Uses)
         ( ***DMBT1***  ; use of   ***DMBT1***   protein for capturing sulfate
         and phosphate groups exposed in disease-assocd. agents)
IT    Inflammation
         (acute; use of   ***DMBT1***   protein for capturing sulfate and
         phosphate groups exposed in disease-assocd. agents)
IT    Klebsiella pneumoniae
      Salmonella minnesota
      Salmonella typhimurium
         (binding to lipopolysaccharide of; use of   ***DMBT1***   protein for
         capturing sulfate and phosphate groups exposed in disease-assocd.
         agents)
IT    Cosmetics
      Drugs
      Food
         (binding to phosphate and/or sulfate groups in; use of   ***DMBT1***
         protein for capturing sulfate and phosphate groups exposed in
         disease-assocd. agents)
IT    Inflammation
         (chronic; use of   ***DMBT1***   protein for capturing sulfate and
         phosphate groups exposed in disease-assocd. agents)
IT    Blood analysis
      Body fluid
      Saliva
      Semen
         (detection of disease agents in; use of   ***DMBT1***   protein for
         capturing sulfate and phosphate groups exposed in disease-assocd.
         agents)
IT    cDNA sequences
         (for human protein   ***DMBT1***  ; use of   ***DMBT1***   protein for
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          capturing sulfate and phosphate groups exposed in disease-assocd.
          agents)
    IT   Envelope proteins
         RL: BSU (Biological study, unclassified); BIOL (Biological study)
            (gp120env, HIV; use of   ***DMBT1***   protein for capturing sulfate
            and phosphate groups exposed in disease-assocd. agents)
    IT   Intestine, disease
            (inflammatory; use of   ***DMBT1***   protein for capturing sulfate and
            phosphate groups exposed in disease-assocd. agents)
    IT   Diagnosis
            (mol.; use of   ***DMBT1***   protein for capturing sulfate and
            phosphate groups exposed in disease-assocd. agents)
    IT   Protein sequences
            (of human protein   ***DMBT1***   ; use of   ***DMBT1***   protein for
            capturing sulfate and phosphate groups exposed in disease-assocd.
            agents)
    IT   Functional groups
            (sulfate; use of   ***DMBT1***   protein for capturing sulfate and
            phosphate groups exposed in disease-assocd. agents)
    IT   Carbohydrates, biological studies
         RL: BSU (Biological study, unclassified); BIOL (Biological study)
            (sulfates; use of   ***DMBT1***   protein for capturing sulfate and
            phosphate groups exposed in disease-assocd. agents)
    IT   Mucins
         RL: BSU (Biological study, unclassified); BIOL (Biological study)
            (sulfomucin; use of   ***DMBT1***   protein for capturing sulfate and
            phosphate groups exposed in disease-assocd. agents)
    IT   Inflammation
         Intestine, disease
            (ulcerative colitis; use of   ***DMBT1***   protein for capturing
            sulfate and phosphate groups exposed in disease-assocd. agents)
    IT   Anti-infective agents
         Anti-inflammatory agents
         Antitumor agents
         Bacillus (bacterium genus)
         Digestive tract, neoplasm
         Escherichia
         Eubacteria
         Helicobacter
         Human
         Infection
         Microorganism
         Neoplasm
         Phosphate group
         Prophylaxis
         Respiratory system, neoplasm
         Salmonella
         Staphylococcus
         Streptococcus
         Virus
            (use of   ***DMBT1***   protein for capturing sulfate and phosphate
            groups exposed in disease-assocd. agents)
    IT   DNA
         Deoxyribonucleotides
         Lipopolysaccharides
         Phosphatidylcholines, biological studies
         Phospholipids, biological studies
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        RL: BSU (Biological study, unclassified); BIOL (Biological study)
           (use of   ***DMBT1***   protein for capturing sulfate and phosphate
           groups exposed in disease-assocd. agents)
   IT   9041-38-7D, Teichoic acid, lipo-
        RL: BSU (Biological study, unclassified); BIOL (Biological study)
           (Lipoteichoic acid; use of   ***DMBT1***   protein for capturing
           sulfate and phosphate groups exposed in disease-assocd. agents)
   IT   863488-17-9
        RL: BSU (Biological study, unclassified); PRP (Properties); THU
        (Therapeutic use); BIOL (Biological study); USES (Uses)
           (active binding site; use of   ***DMBT1***   protein for capturing
           sulfate and phosphate groups exposed in disease-assocd. agents)
   IT   863526-17-4, Protein   ***DMBT1***   (human)
        RL: BSU (Biological study, unclassified); PRP (Properties); THU
        (Therapeutic use); BIOL (Biological study); USES (Uses)
           (amino acid sequence; use of   ***DMBT1***   protein for capturing
           sulfate and phosphate groups exposed in disease-assocd. agents)
   IT   863526-16-3, DNA (human protein   ***DMBT1***   cDNA)
        RL: BSU (Biological study, unclassified); PRP (Properties); THU
        (Therapeutic use); BIOL (Biological study); USES (Uses)
           (nucleotide sequence; use of   ***DMBT1***   protein for capturing
           sulfate and phosphate groups exposed in disease-assocd. agents)
   IT   863526-21-0    863526-22-1    863526-23-2    863526-24-3    863526-25-4
        863526-26-5
        RL: PRP (Properties)
           (unclaimed nucleotide sequence; use of   ***DMBT1***   protein for
           capturing sulfate and phosphate groups exposed in disease-assocd.
           agents)
   IT   7757-82-6, Disodium sulfate, biological studies   9000-07-1, Carrageenan
        9007-28-7, Chondroitin sulfate   9011-18-1, Dextran sulfate sodium
        9050-30-0
        RL: BSU (Biological study, unclassified); BIOL (Biological study)
           (use of   ***DMBT1***   protein for capturing sulfate and phosphate
           groups exposed in disease-assocd. agents)

L28   ANSWER 14 OF 22  CAPLUS  COPYRIGHT 2009 ACS on STN
AN    2005:216606  CAPLUS <<LOGINID::20090423>>
DN    142:292452
TI    Compns. and methods for   ***treating***   and diagnosing chronic visceral
      hypersensitivity and irritable bowel syndrome, based on differential gene
      or protein expression
IN    Pasricha, Pankaj; Shenoy, Mohan; Winston, John
PA    Cytokine Pharmasciences, Inc., USA
SO    PCT Int. Appl., 181 pp.
      CODEN: PIXXD2
DT    Patent
LA    English
FAN.CNT 1
      PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
      --------------      ----   -------     -------------------     --------
PI    WO 2005020902       A2     20050310    WO 2004-US27356         20040823
      WO 2005020902       A3     20060727
          W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
              CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
              GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
              LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
              NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
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                  TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
              RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
                  AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
                  EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
                  SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
                  SN, TD, TG
         US 20050130189       A1     20050616    US 2004-923035           20040823
    PRAI US 2003-496716P      P       20030821
    AB   Compns. and methods for diagnosing and   ***treating***   chronic visceral
         hypersensitivity (CVH) and CVH-assocd. disorders, such as irritable bowel
         syndrome, are disclosed.  Genes differentially expressed in CVH tissues
         relative to normal tissues are identified.  The genes and the gene
         products (i.e., the transcribed polynucleotides and polypeptides encoded
         by the genes) can be used as markers of CVH.  The genes and the gene
         products can also be used to screen agents that modulate the gene
         expression or the activities of the gene products.  The examples discuss
         the effects of acetic acid sensitization and CNI1493   ***treatment***
         on the colon and S1 dorsal root ganglia in a rat model of visceral
         hypersensitivity.  Gene expression profiles assocd. with these
           ***treatments***   are presented, and rat CVH-related genes and
         polypeptides are identified.
    TI   Compns. and methods for   ***treating***   and diagnosing chronic visceral
         hypersensitivity and irritable bowel syndrome, based on differential gene
         or protein expression
    AB   Compns. and methods for diagnosing and   ***treating***   chronic visceral
         hypersensitivity (CVH) and CVH-assocd. disorders, such as irritable bowel
         syndrome, are disclosed.  Genes differentially expressed in CVH tissues.
         .  .  gene expression or the activities of the gene products.  The
         examples discuss the effects of acetic acid sensitization and CNI1493
           ***treatment***   on the colon and S1 dorsal root ganglia in a rat model
         of visceral hypersensitivity.  Gene expression profiles assocd. with these
           ***treatments***   are presented, and rat CVH-related genes and
         polypeptides are identified.
    SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
    ST     ***treatment***   diagnosis irritable bowel syndrome chronic visceral
         hypersensitivity; sequence protein gene expression profile chronic
         visceral hypersensitivity rat; chronic visceral hypersensitivity
         diagnosis.  .  .
    IT   Tropomyosins
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (1, .alpha.; compns. and methods for   ***treating***   and diagnosing
             chronic visceral hypersensitivity and irritable bowel syndrome, based
             on gene or protein expression profiles)
    IT   Kinesins
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (1C; compns. and methods for   ***treating***   and diagnosing chronic
             visceral hypersensitivity and irritable bowel syndrome, based on gene
             or protein expression profiles)
    IT   Synaptobrevins
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (2; compns. and methods for   ***treating***   and diagnosing chronic
             visceral hypersensitivity and irritable bowel syndrome, based on gene
             or protein expression profiles)
    IT   Cyclin dependent kinase inhibitors
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       RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
       (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (2B; compns. and methods for   ***treating***   and diagnosing chronic
          visceral hypersensitivity and irritable bowel syndrome, based on gene
          or protein expression profiles)
  IT   Tropomyosins
       RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
       (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (3, .gamma.-; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
  IT   Ankyrins
       Calmodulins
       RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
       (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (3; compns. and methods for   ***treating***   and diagnosing chronic
          visceral hypersensitivity and irritable bowel syndrome, based on gene
          or protein expression profiles)
  IT   Aquaporins
       RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
       (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (7, sequence homolog; compns. and methods for   ***treating***   and
          diagnosing chronic visceral hypersensitivity and irritable bowel
          syndrome, based on gene or protein expression profiles)
  IT   Aquaporins
       RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
       (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (8; compns. and methods for   ***treating***   and diagnosing chronic
          visceral hypersensitivity and irritable bowel syndrome, based on gene
          or protein expression profiles)
  IT   Transport proteins
       RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
       (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (ABC (ATP-binding cassette) transporters, 1; compns. and methods for
           ***treating***   and diagnosing chronic visceral hypersensitivity and
          irritable bowel syndrome, based on gene or protein expression profiles)
  IT   Transport proteins
       RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
       (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (ABC (ATP-binding cassette) transporters, subfamily B (MDRITAP), member
          11; compns. and methods for   ***treating***   and diagnosing chronic
          visceral hypersensitivity and irritable bowel syndrome, based on gene
          or protein expression profiles)
  IT   Transport proteins
       RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
       (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (ABCC9 (ATP-binding cassette transporter sub-family C, member 9);
          compns. and methods for   ***treating***   and diagnosing chronic
          visceral hypersensitivity and irritable bowel syndrome, based on gene
          or protein expression profiles)
  IT   Gene, animal
       RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
       (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (ADAMTS1; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
  IT   Proteins
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         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (ADP ribosylation-like 4; compns. and methods for   ***treating***
            and diagnosing chronic visceral hypersensitivity and irritable bowel
            syndrome, based on gene or protein expression profiles)
   IT    Cytokines
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (AIF-1 (allograft inflammatory factor 1); compns. and methods for
             ***treating***   and diagnosing chronic visceral hypersensitivity and
            irritable bowel syndrome, based on gene or protein expression profiles)
   IT    Aquaporins
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (AQP3; compns. and methods for   ***treating***   and diagnosing
            chronic visceral hypersensitivity and irritable bowel syndrome, based
            on gene or protein expression profiles)
   IT    Gene, animal
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (ARGBP2; compns. and methods for   ***treating***   and diagnosing
            chronic visceral hypersensitivity and irritable bowel syndrome, based
            on gene or protein expression profiles)
   IT    G proteins (guanine nucleotide-binding proteins)
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (ARL (ADP-ribosylation factor-like), ARL6; compns. and methods for
             ***treating***   and diagnosing chronic visceral hypersensitivity and
            irritable bowel syndrome, based on gene or protein expression profiles)
   IT    Transcription factors
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (ARNT (aryl hydrocarbon receptor nuclear translocator), sequence
            homolog; compns. and methods for   ***treating***   and diagnosing
            chronic visceral hypersensitivity and irritable bowel syndrome, based
            on gene or protein expression profiles)
   IT    Gene, animal
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (Aa2-277; compns. and methods for   ***treating***   and diagnosing
            chronic visceral hypersensitivity and irritable bowel syndrome, based
            on gene or protein expression profiles)
   IT    Gene, animal
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (Acta2; compns. and methods for   ***treating***   and diagnosing
            chronic visceral hypersensitivity and irritable bowel syndrome, based
            on gene or protein expression profiles)
   IT    Gene, animal
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (Actg2; compns. and methods for   ***treating***   and diagnosing
            chronic visceral hypersensitivity and irritable bowel syndrome, based
            on gene or protein expression profiles)
   IT    Gene, animal
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
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          (Add3; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
    IT    Gene, animal
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (Amigo2; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
    IT    Proteins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (Arg/Abl-interacting, ArgBP2; compns. and methods for   ***treating***
          and diagnosing chronic visceral hypersensitivity and irritable bowel
          syndrome, based on gene or protein expression profiles)
    IT    Gene, animal
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (BC019836; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
    IT    Gene, animal
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (BDNF; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
    IT    Proteins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (Best5; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
    IT    Transcription factors
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (C/EBP-.delta. (CCAAT box/enhancer element-binding protein .delta.);
          compns. and methods for   ***treating***   and diagnosing chronic
          visceral hypersensitivity and irritable bowel syndrome, based on gene
          or protein expression profiles)
    IT    CD antigens
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (CD9; compns. and methods for   ***treating***   and diagnosing chronic
          visceral hypersensitivity and irritable bowel syndrome, based on gene
          or protein expression profiles)
    IT    Proteins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (CDK104; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
    IT    Proteins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (CLASP2 (CLIP-assocg. protein 2); compns. and methods for
            ***treating***   and diagnosing chronic visceral hypersensitivity and
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irritable bowel syndrome, based on gene or protein expression profiles)
     IT   Transcription factors
           RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
           (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
              (CREB (cAMP-responsive element-binding), 1; compns. and methods for
                treating   and diagnosing chronic visceral hypersensitivity and
              irritable bowel syndrome, based on gene or protein expression profiles)
     IT   Proteins
           RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
           (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
              (CTD-binding SR-like protein rA4; compns. and methods for
                treating   and diagnosing chronic visceral hypersensitivity and
              irritable bowel syndrome, based on gene or protein expression profiles)
     IT   mRNA
           RL: ANT (Analyte); ANST (Analytical study)
              (CVH-related, differentially expressed; compns. and methods for
                treating   and diagnosing chronic visceral hypersensitivity and
              irritable bowel syndrome, based on gene or protein expression profiles)
     IT   Gene, animal
           Proteins
           RL: BSU (Biological study, unclassified); BIOL (Biological study)
              (CVH-related; compns. and methods for   ***treating***   and diagnosing
              chronic visceral hypersensitivity and irritable bowel syndrome, based
              on gene or protein expression profiles)
     IT   Gene, animal
           RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
           (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
              (Camk2g; compns. and methods for   ***treating***   and diagnosing
              chronic visceral hypersensitivity and irritable bowel syndrome, based
              on gene or protein expression profiles)
     IT   DNA
           RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
           (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
              (Cas-Br-M (murine) ectopic retroviral transforming sequence b; compns.
              and methods for   ***treating***   and diagnosing chronic visceral
              hypersensitivity and irritable bowel syndrome, based on gene or protein
              expression profiles)
     IT   Gene, animal
           RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
           (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
              (Casq2; compns. and methods for   ***treating***   and diagnosing
              chronic visceral hypersensitivity and irritable bowel syndrome, based
              on gene or protein expression profiles)
     IT   Gene, animal
           RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
           (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
              (Cd9; compns. and methods for   ***treating***   and diagnosing chronic
              visceral hypersensitivity and irritable bowel syndrome, based on gene
              or protein expression profiles)
     IT   Gene, animal
           RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
           (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
              (Cdkn1b; compns. and methods for   ***treating***   and diagnosing
              chronic visceral hypersensitivity and irritable bowel syndrome, based
              on gene or protein expression profiles)
     IT   Gene, animal
           RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP

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          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (Ceacam1; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
   IT   Gene, animal
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (Cebpd; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
   IT   Chloride channel
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (ClC-2; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
   IT   Gene, animal
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (Csrp1; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
   IT   Gene, animal
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (Ctl1; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
   IT   Gene, animal
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (Cxcl12; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
   IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (DAMP-1; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
   IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (   ***DMBT1***   ; compns. and methods for   ***treating***   and
          diagnosing chronic visceral hypersensitivity and irritable bowel
          syndrome, based on gene or protein expression profiles)
   IT   mRNA
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (DNA damage-inducible transcript 3; compns. and methods for
           ***treating***   and diagnosing chronic visceral hypersensitivity and
          irritable bowel syndrome, based on gene or protein expression profiles)
   IT   Gene, animal
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (Des; compns. and methods for   ***treating***   and diagnosing chronic
          visceral hypersensitivity and irritable bowel syndrome, based on gene
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              or protein expression profiles)
  IT    Gene, animal
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (Desmuslin; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
  IT    Gene, animal
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (Dgkb; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
  IT    Gene, animal
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (Dmrs91; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
  IT    Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (ECM1 (extracellular matrix protein 1); compns. and methods for
            ***treating***   and diagnosing chronic visceral hypersensitivity and
           irritable bowel syndrome, based on gene or protein expression profiles)
  IT    Gene, animal
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (EEF2k; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
  IT    Gene, animal
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (Evt1; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
  IT    Gene, animal
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (Exo70; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
  IT    Gene, animal
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (FBXL22; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
  IT    Gene, animal
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (FGR; compns. and methods for   ***treating***   and diagnosing chronic
           visceral hypersensitivity and irritable bowel syndrome, based on gene
           or protein expression profiles)
  IT    Gene, animal
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
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(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Fn1; compns. and methods for   ***treating***   and diagnosing chronic
visceral hypersensitivity and irritable bowel syndrome, based on gene
or protein expression profiles)
IT   Gene, animal
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Fxyde; compns. and methods for   ***treating***   and diagnosing
chronic visceral hypersensitivity and irritable bowel syndrome, based
on gene or protein expression profiles)
IT   Cyclins
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(G1; compns. and methods for   ***treating***   and diagnosing chronic
visceral hypersensitivity and irritable bowel syndrome, based on gene
or protein expression profiles)
IT   GABA receptors
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(GABAA, .delta.; compns. and methods for   ***treating***   and
diagnosing chronic visceral hypersensitivity and irritable bowel
syndrome, based on gene or protein expression profiles)
IT   Gene, animal
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(GBP2; compns. and methods for   ***treating***   and diagnosing
chronic visceral hypersensitivity and irritable bowel syndrome, based
on gene or protein expression profiles)
IT   Proteins
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(GTP cyclohydrolase I feedback regulatory protein; compns. and methods
for   ***treating***   and diagnosing chronic visceral hypersensitivity
and irritable bowel syndrome, based on gene or protein expression
profiles)
IT   Gene, animal
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Gch; compns. and methods for   ***treating***   and diagnosing chronic
visceral hypersensitivity and irritable bowel syndrome, based on gene
or protein expression profiles)
IT   Histones
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(H1.0; compns. and methods for   ***treating***   and diagnosing
chronic visceral hypersensitivity and irritable bowel syndrome, based
on gene or protein expression profiles)
IT   Histones
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(H2B, sequence homolog; compns. and methods for   ***treating***   and
diagnosing chronic visceral hypersensitivity and irritable bowel
syndrome, based on gene or protein expression profiles)
IT   Histones
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(H4, germinal; compns. and methods for   ***treating***   and

diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Transcription factors
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (HES-1 (hairy and enhancer of split 1); compns. and methods for
            treating   and diagnosing chronic visceral hypersensitivity and
        irritable bowel syndrome, based on gene or protein expression profiles)
IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (HNF-3/forkhead homolog-I; compns. and methods for   ***treating***
            and diagnosing chronic visceral hypersensitivity and irritable bowel
            syndrome, based on gene or protein expression profiles)
IT   Heat-shock proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (HSP 27, 1; compns. and methods for   ***treating***   and diagnosing
            chronic visceral hypersensitivity and irritable bowel syndrome, based
            on gene or protein expression profiles)
IT   Heat-shock proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
            (HSP20; compns. and methods for   ***treating***   and diagnosing
            chronic visceral hypersensitivity and irritable bowel syndrome, based
            on gene or protein expression profiles
IT   Gene, animal
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (HSP70.2; compns. and methods for   ***treating***   and diagnosing
            chronic visceral hypersensitivity and irritable bowel syndrome, based
            on gene or protein expression profiles)
IT   Gene, animal
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (HSPB1; compns. and methods for   ***treating***   and diagnosing
            chronic visceral hypersensitivity and irritable bowel syndrome, based
            on gene or protein expression profiles)
IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (I-FABP (intestinal fatty acid-binding protein); compns. and methods
            for   ***treating***   and diagnosing chronic visceral hypersensitivity
            and irritable bowel syndrome, based on gene or protein expression
            profiles)
IT   Fibronectins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (I; compns. and methods for   ***treating***   and diagnosing chronic
            visceral hypersensitivity and irritable bowel syndrome, based on gene
            or protein expression profiles)
IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (IAP (integrin-assocd. protein); compns. and methods for
            treating   and diagnosing chronic visceral hypersensitivity and

irritable bowel syndrome, based on gene or protein expression profiles)
IT   Transcription factors
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (ID1 (inhibitor of differentiation 1), helix-loop-helix protein (splice
         variation); compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (IFI27; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Insulin-like growth factor-binding proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (IGFBP-2, gene IGFBP2; compns. and methods for   ***treating***   and
         diagnosing chronic visceral hypersensitivity and irritable bowel
         syndrome, based on gene or protein expression profiles)
IT   Insulin-like growth factor-binding proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (IGFBP-5; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Transcription factors
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (III, general; compns. and methods for   ***treating***   and
         diagnosing chronic visceral hypersensitivity and irritable bowel
         syndrome, based on gene or protein expression profiles)
IT   Secretogranins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (III; compns. and methods for   ***treating***   and diagnosing chronic
         visceral hypersensitivity and irritable bowel syndrome, based on gene
         or protein expression profiles)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (ILIR1; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (IRF7; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Transcription factors
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (ISGF-2 (interferon-stimulated gene factor 2); compns. and methods for
          treating   and diagnosing chronic visceral hypersensitivity and
         irritable bowel syndrome, based on gene or protein expression profiles)
IT   Gene, animal

RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Ifitm31; compns. and methods for   ***treating***   and diagnosing
chronic visceral hypersensitivity and irritable bowel syndrome, based
on gene or protein expression profiles)
IT   Gene, animal
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Igfbp2; compns. and methods for   ***treating***   and diagnosing
chronic visceral hypersensitivity and irritable bowel syndrome, based
on gene or protein expression profiles)
IT   Gene, animal
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Itgb1; compns. and methods for   ***treating***   and diagnosing
chronic visceral hypersensitivity and irritable bowel syndrome, based
on gene or protein expression profiles)
IT   Transcription factors
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(KLF (Kruppel-like factor), 9; compns. and methods for   ***treating***
and diagnosing chronic visceral hypersensitivity and irritable bowel
syndrome, based on gene or protein expression profiles)
IT   Gene, animal
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Kcnj8; compns. and methods for   ***treating***   and diagnosing
chronic visceral hypersensitivity and irritable bowel syndrome, based
on gene or protein expression profiles)
IT   Transcription factors
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(LDB1 (LIM domain-binding 1); compns. and methods for   ***treating***
and diagnosing chronic visceral hypersensitivity and irritable bowel
syndrome, based on gene or protein expression profiles)
IT   Lipoprotein receptors
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(LDL; compns. and methods for   ***treating***   and diagnosing chronic
visceral hypersensitivity and irritable bowel syndrome, based on gene
or protein expression profiles)
IT   Proteins
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(LIM domain-contg., actinin .alpha.2-assocd. LIM protein; compns. and
methods for   ***treating***   and diagnosing chronic visceral
hypersensitivity and irritable bowel syndrome, based on gene or protein
expression profiles)
IT   Proteins
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(LL5 protein; compns. and methods for   ***treating***   and diagnosing
chronic visceral hypersensitivity and irritable bowel syndrome, based
on gene or protein expression profiles)
IT   Gene, animal
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(LOC286989; compns. and methods for   ***treating***   and diagnosing
chronic visceral hypersensitivity and irritable bowel syndrome, based
on gene or protein expression profiles)

IT   Gene, animal
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(LOC308709; compns. and methods for   ***treating***   and diagnosing
chronic visceral hypersensitivity and irritable bowel syndrome, based
on gene or protein expression profiles)

IT   Gene, animal
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(LOC78973; compns. and methods for   ***treating***   and diagnosing
chronic visceral hypersensitivity and irritable bowel syndrome, based
on gene or protein expression profiles)

IT   Multidrug resistance proteins
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(LRP (lung resistance protein); compns. and methods for
treating   and diagnosing chronic visceral hypersensitivity and
irritable bowel syndrome, based on gene or protein expression profiles)

IT   Proteins
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(LRP16; compns. and methods for   ***treating***   and diagnosing
chronic visceral hypersensitivity and irritable bowel syndrome, based
on gene or protein expression profiles)

IT   Gene, animal
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Lgals1; compns. and methods for   ***treating***   and diagnosing
chronic visceral hypersensitivity and irritable bowel syndrome, based
on gene or protein expression profiles)

IT   Gene, animal
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Loc192245; compns. and methods for   ***treating***   and diagnosing
chronic visceral hypersensitivity and irritable bowel syndrome, based
on gene or protein expression profiles)

IT   Enzymes, biological studies
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(MAP4K3 (mitogen-activated protein kinase kinase kinase kinase 3);
compns. and methods for   ***treating***   and diagnosing chronic
visceral hypersensitivity and irritable bowel syndrome, based on gene
or protein expression profiles)

IT   Proteins
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(MAWD-binding protein; compns. and methods for   ***treating***   and
diagnosing chronic visceral hypersensitivity and irritable bowel
syndrome, based on gene or protein expression profiles)

IT   P-glycoproteins
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(MDR1, 2; compns. and methods for   ***treating***   and diagnosing
chronic visceral hypersensitivity and irritable bowel syndrome, based

on gene or protein expression profiles)
IT   P-glycoproteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (MDR1; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Histocompatibility antigens
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (MHC (major histocompatibility antigen complex), class Ib, Bm1k;
        compns. and methods for   ***treating***   and diagnosing chronic
        visceral hypersensitivity and irritable bowel syndrome, based on gene
        or protein expression profiles)
IT   Histocompatibility antigens
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (MHC (major histocompatibility complex), class I; compns. and methods
        for   ***treating***   and diagnosing chronic visceral hypersensitivity
        and irritable bowel syndrome, based on gene or protein expression
        profiles)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (MRCL3; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (MRLC2; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (Mvk; compns. and methods for   ***treating***   and diagnosing chronic
        visceral hypersensitivity and irritable bowel syndrome, based on gene
        or protein expression profiles)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (Myh11; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (Myxovirus (influenza) resistance protein; compns. and methods for
         treating   and diagnosing chronic visceral hypersensitivity and
        irritable bowel syndrome, based on gene or protein expression profiles)
IT   Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (NOV; compns. and methods for   ***treating***   and diagnosing chronic
        visceral hypersensitivity and irritable bowel syndrome, based on gene
        or protein expression profiles)

IT   mRNA
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (NYGGF3; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (Ncor1; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Proteinase-activated receptors
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (PAR-2; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Gene, animal
      Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (PEP-19; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (PKC-.delta.-binding protein; compns. and methods for   ***treating***
         and diagnosing chronic visceral hypersensitivity and irritable bowel
         syndrome, based on gene or protein expression profiles)
IT   Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (PMF32; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (Parva; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (Pcp4; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (Porf1; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP

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                 (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                    (Ppargc1; compns. and methods for   ***treating***   and diagnosing
                    chronic visceral hypersensitivity and irritable bowel syndrome, based
                    on gene or protein expression profiles)
         IT   Gene, animal
                 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
                 (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                    (Ppp1r14a; compns. and methods for   ***treating***   and diagnosing
                    chronic visceral hypersensitivity and irritable bowel syndrome, based
                    on gene or protein expression profiles)
         IT   Gene, animal
                 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
                 (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                    (Ppp4r1; compns. and methods for   ***treating***   and diagnosing
                    chronic visceral hypersensitivity and irritable bowel syndrome, based
                    on gene or protein expression profiles)
         IT   Gene, animal
                 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
                 (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                    (Prkcdbp; compns. and methods for   ***treating***   and diagnosing
                    chronic visceral hypersensitivity and irritable bowel syndrome, based
                    on gene or protein expression profiles)
         IT   Proteins
                 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
                 (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                    (RGS-4 (regulator of G protein signaling 4); compns. and methods for
                     ***treating***   and diagnosing chronic visceral hypersensitivity and
                    irritable bowel syndrome, based on gene or protein expression profiles)
         IT   Proteins
                 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
                 (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                    (RGS-5 (regulator of G protein signaling 5); compns. and methods for
                     ***treating***   and diagnosing chronic visceral hypersensitivity and
                    irritable bowel syndrome, based on gene or protein expression profiles)
         IT   Gene, animal
                 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
                 (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                    (RIPK4; compns. and methods for   ***treating***   and diagnosing
                    chronic visceral hypersensitivity and irritable bowel syndrome, based
                    on gene or protein expression profiles)
         IT   Gene, animal
                 Gene, animal
                 Proteins
                 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
                 (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                    (RT1 class Ib; compns. and methods for   ***treating***   and
                    diagnosing chronic visceral hypersensitivity and irritable bowel
                    syndrome, based on gene or protein expression profiles)
         IT   Histocompatibility antigens
                 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
                 (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                    (RT1.C/E; compns. and methods for   ***treating***   and diagnosing
                    chronic visceral hypersensitivity and irritable bowel syndrome, based
                    on gene or protein expression profiles)
         IT   mRNA
                 RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
                 (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
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(RT1.Ma; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
    IT   Proteins
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (Reelin; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
    IT   Proteins
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (Rgc32; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
    IT   G proteins (guanine nucleotide-binding proteins)
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (Rho family GTPase 1; compns. and methods for   ***treating***   and
           diagnosing chronic visceral hypersensitivity and irritable bowel
           syndrome, based on gene or protein expression profiles)
    IT   Calcium-binding proteins
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (S100A4; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
    IT   Gene, animal
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (SAMD9; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
    IT   Gene, animal
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (SLC28a2; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
    IT   Proteins
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (SNARE Vtila-beta protein; compns. and methods for   ***treating***
           and diagnosing chronic visceral hypersensitivity and irritable bowel
           syndrome, based on gene or protein expression profiles)
    IT   Somatostatin receptors
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (SSTR1; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
    IT   Somatostatin receptors
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (SSTR2; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)

IT   Transcription factors
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (STAT1 (signal transducer and activator of transcription 1); compns.
        and methods for   ***treating***   and diagnosing chronic visceral
        hypersensitivity and irritable bowel syndrome, based on gene or protein
        expression profiles)
IT   Gene, animal
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
        (Scya4; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles
IT   Proteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (Short stature homeobox2; compns. and methods for   ***treating***
        and diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Gene, animal
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (Slc25a4; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Gene, animal
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (Stmn2; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Gene, animal
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (Sult-n; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Proteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (TAF9-like RNA polymerase II, TATA box-binding protein (TBP)-assocd.
        factor, 31 kD; compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Transcription factors
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (TFIIF (transcription factor IIF), polypeptide 2; compns. and methods
        for   ***treating***   and diagnosing chronic visceral hypersensitivity
        and irritable bowel syndrome, based on gene or protein expression
        profiles)
IT   Gene, animal
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (TREK2; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based

on gene or protein expression profiles)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (Tagln; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (Tfrc; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (Tpm1; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (Tspan-2; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (Tubb3; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Annexins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (V; compns. and methods for   ***treating***   and diagnosing chronic
         visceral hypersensitivity and irritable bowel syndrome, based on gene
         or protein expression profiles)
IT   Lipoprotein receptors
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (VLDL; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (Wfdc1; compns. and methods for   ***treating***   and diagnosing
         chronic visceral hypersensitivity and irritable bowel syndrome, based
         on gene or protein expression profiles)
IT   Tenascins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (X; compns. and methods for   ***treating***   and diagnosing chronic
         visceral hypersensitivity and irritable bowel syndrome, based on gene
         or protein expression profiles)
IT   Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP

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          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (amiloride-binding protein I; compns. and methods for   ***treating***
             and diagnosing chronic visceral hypersensitivity and irritable bowel
             syndrome, based on gene or protein expression profiles)
   IT    Cation channel
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (amiloride-sensitive, 1; compns. and methods for   ***treating***   and
             diagnosing chronic visceral hypersensitivity and irritable bowel
             syndrome, based on gene or protein expression profiles)
   IT    Transport proteins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (amino acid transporter, SLC7A9; compns. and methods for
             ***treating***   and diagnosing chronic visceral hypersensitivity and
             irritable bowel syndrome, based on gene or protein expression profiles)
   IT    Proteins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (angiopoietin-like 2; compns. and methods for   ***treating***   and
             diagnosing chronic visceral hypersensitivity and irritable bowel
             syndrome, based on gene or protein expression profiles)
   IT    Proteins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (apolipoprotein B-editing protein; compns. and methods for
             ***treating***   and diagnosing chronic visceral hypersensitivity and
             irritable bowel syndrome, based on gene or protein expression profiles)
   IT    Proteins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (apoptosis-assocd. speck-like protein; compns. and methods for
             ***treating***   and diagnosing chronic visceral hypersensitivity and
             irritable bowel syndrome, based on gene or protein expression profiles)
   IT    Arrestins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (arrestin E; compns. and methods for   ***treating***   and diagnosing
             chronic visceral hypersensitivity and irritable bowel syndrome, based
             on gene or protein expression profiles)
   IT    Proteins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (axin 2; compns. and methods for   ***treating***   and diagnosing
             chronic visceral hypersensitivity and irritable bowel syndrome, based
             on gene or protein expression profiles)
   IT    Proteins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (basic helix-loop-helix domain-contg. protein, class B2; compns. and
             methods for   ***treating***   and diagnosing chronic visceral
             hypersensitivity and irritable bowel syndrome, based on gene or protein
             expression profiles)
   IT    Probes (nucleic acid)
          RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study);
          USES (Uses)
             (binding to CVH-related polynucleotide; compns. and methods for
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treating   and diagnosing chronic visceral hypersensitivity and
        irritable bowel syndrome, based on gene or protein expression profiles)
IT   Biochemical compounds
      RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study);
      USES (Uses)
           (binding to CVH-related polypeptides; compns. and methods for
             treating   and diagnosing chronic visceral hypersensitivity and
           irritable bowel syndrome, based on gene or protein expression profiles)
IT   Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (***brain*** -enriched membrane-assocd. protein tyrosine BEM-2;
           compns. and methods for   ***treating***   and diagnosing chronic
           visceral hypersensitivity and irritable bowel syndrome, based on gene
           or protein expression profiles)
IT   Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (***brain*** -specific angiogenesis inhibitor 1-assocd. protein 2;
           compns. and methods for   ***treating***   and diagnosing chronic
           visceral hypersensitivity and irritable bowel syndrome, based on gene
           or protein expression profiles)
IT   Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (cIAP-1 (cellular inhibitor of apoptosis protein 1); compns. and
           methods for   ***treating***   and diagnosing chronic visceral
           hypersensitivity and irritable bowel syndrome, based on gene or protein
           expression profiles)
IT   Potassium channel
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (calcium-activated intermediate and small conductance; compns. and
           methods for   ***treating***   and diagnosing chronic visceral
           hypersensitivity and irritable bowel syndrome, based on gene or protein
           expression profiles)
IT   Calponin
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (calponin 1; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
IT   Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (calsequestrin 2; compns. and methods for   ***treating***   and
           diagnosing chronic visceral hypersensitivity and irritable bowel
           syndrome, based on gene or protein expression profiles)
IT   Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (ceruloplasmin; compns. and methods for   ***treating***   and
           diagnosing chronic visceral hypersensitivity and irritable bowel
           syndrome, based on gene or protein expression profiles)
IT   Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(chemokine (C-X-C motif) ligand 10; compns. and methods for
                treating   and diagnosing chronic visceral hypersensitivity and
            irritable bowel syndrome, based on gene or protein expression profiles)
    IT   Chemokine receptors
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (chemokine orphan receptor 1; compns. and methods for   ***treating***
            and diagnosing chronic visceral hypersensitivity and irritable bowel
            syndrome, based on gene or protein expression profiles)
    IT   Intestine, disease
            (chronic visceral hypersensitivity; compns. and methods for
                treating   and diagnosing chronic visceral hypersensitivity and
            irritable bowel syndrome, based on gene or protein expression profiles)
    IT   Gene, animal
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (cig5; compns. and methods for   ***treating***   and diagnosing
            chronic visceral hypersensitivity and irritable bowel syndrome, based
            on gene or protein expression profiles)
    IT   Intestine
            (colon, gene expression profiles in; compns. and methods for
                treating   and diagnosing chronic visceral hypersensitivity and
            irritable bowel syndrome, based on gene or protein expression profiles)
    IT   Drugs
         Human
         Protein expression profiles, animal
         Rat endogenous retrovirus
            (compns. and methods for   ***treating***   and diagnosing chronic
            visceral hypersensitivity and irritable bowel syndrome, based on gene
            or protein expression profiles)
    IT   Agrins
         Angiotensin receptors
         Biglycans
         Bone morphogenetic protein 3
         Bone morphogenetic protein 6
         CD36 (antigen)
         CD38 (antigen)
         Caveolins
         Desmins
         EST (expressed sequence tag)
         Fc.gamma.RIII receptors
         GAP-43 (protein)
         Macrophage inflammatory protein 1.beta.
         Synaptophysin
         Thrombomodulin
         Vasopressin receptors
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (compns. and methods for   ***treating***   and diagnosing chronic
            visceral hypersensitivity and irritable bowel syndrome, based on gene
            or protein expression profiles)
    IT   Complement receptors
         RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
         (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (component 3a receptor 1; compns. and methods for   ***treating***
            and diagnosing chronic visceral hypersensitivity and irritable bowel
            syndrome, based on gene or protein expression profiles)

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IT   Biochips
        (comprising CVH-related polynucleotide or polypeptide; compns. and
        methods for   ***treating***   and diagnosing chronic visceral
        hypersensitivity and irritable bowel syndrome, based on gene or protein
        expression profiles)
IT   Growth factors, animal
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (connective tissue; compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Proteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (cysteine-rich protein 2; compns. and methods for   ***treating***
        and diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Proteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (cysteine-rich, cysteine-rich protein 1; compns. and methods for
        ***treating***   and diagnosing chronic visceral hypersensitivity and
        irritable bowel syndrome, based on gene or protein expression profiles)
IT   Proteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (desmuslin; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Proteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (developmentally regulated protein TPO1; compns. and methods for
        ***treating***   and diagnosing chronic visceral hypersensitivity and
        irritable bowel syndrome, based on gene or protein expression profiles)
IT   Translation elongation factors
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (eEF-1.alpha.; compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Proteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (enigma (LIM domain protein); compns. and methods for   ***treating***
        and diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Kinesins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (family member B; compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Proteoglycans, biological studies
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (fibromodulin; compns. and methods for   ***treating***   and
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diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Test kits
        (for diagnosing CVH; compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (fracture callus protein MUSTANG; compns. and methods for
          treating   and diagnosing chronic visceral hypersensitivity and
        irritable bowel syndrome, based on gene or protein expression profiles)
IT   Agglutinins and Lectins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (galactose-binding, sol. 1; compns. and methods for   ***treating***
        and diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Agglutinins and Lectins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (galectin-5; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Agglutinins and Lectins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (galectin-9; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (gene lyn; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (glutaredoxins, 1; compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (glycine-, glutamate-, thienylcyclohexylpiperidine-binding protein;
        compns. and methods for   ***treating***   and diagnosing chronic
        visceral hypersensitivity and irritable bowel syndrome, based on gene
        or protein expression profiles)
IT   Proteoglycans, biological studies
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (glypican-1; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP

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        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (granulins; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
   IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (gremlin; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
   IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (guanine nucleotide-binding .alpha.-inhibiting 1; compns. and methods
           for   ***treating***   and diagnosing chronic visceral hypersensitivity
           and irritable bowel syndrome, based on gene or protein expression
           profiles)
   IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (guanylate cyclase activator 2A; compns. and methods for
            ***treating***   and diagnosing chronic visceral hypersensitivity and
           irritable bowel syndrome, based on gene or protein expression profiles)
   IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (guanylate-binding protein 2, interferon-inducible; compns. and methods
           for   ***treating***   and diagnosing chronic visceral hypersensitivity
           and irritable bowel syndrome, based on gene or protein expression
           profiles)
   IT   Myosins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (heavy chain 11; compns. and methods for   ***treating***   and
           diagnosing chronic visceral hypersensitivity and irritable bowel
           syndrome, based on gene or protein expression profiles)
   IT   Myosins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (heavy chain, unconventional myosin Myr2 I; compns. and methods for
            ***treating***   and diagnosing chronic visceral hypersensitivity and
           irritable bowel syndrome, based on gene or protein expression profiles)
   IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (homeobox A5; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
   IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (homocysteine-respondent protein HCYP2; compns. and methods for
            ***treating***   and diagnosing chronic visceral hypersensitivity and
           irritable bowel syndrome, based on gene or protein expression profiles)
   IT   Pain
           (hyperalgesia, visceral, produced in rat model of CVH; compns. and
           methods for   ***treating***   and diagnosing chronic visceral
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hypersensitivity and irritable bowel syndrome, based on gene or protein
                expression profiles)
     IT   Chemokines
            RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
            (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                (interferon .gamma.-inducible protein-10; compns. and methods for
                 treating   and diagnosing chronic visceral hypersensitivity and
                irritable bowel syndrome, based on gene or protein expression profiles)
     IT   Proteins
            RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
            (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
                (interferon .gamma.-inducing factor-binding protein; compns. and
                methods for   ***treating***   and diagnosing chronic visceral
                hypersensitivity and irritable bowel syndrome, based on gene or protein
                expression profiles
     IT   Proteins
            RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
            (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                (interferon-inducible, variant 10; compns. and methods for
                 treating   and diagnosing chronic visceral hypersensitivity and
                irritable bowel syndrome, based on gene or protein expression profiles)
     IT   mRNA
            RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
            (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                (intestinal epithelium proliferating cell-assocd.; compns. and methods
                for   ***treating***   and diagnosing chronic visceral hypersensitivity
                and irritable bowel syndrome, based on gene or protein expression
                profiles)
     IT   Intestine, disease
                (irritable bowel syndrome; compns. and methods for   ***treating***
                and diagnosing chronic visceral hypersensitivity and irritable bowel
                syndrome, based on gene or protein expression profiles)
     IT   Proteins
            RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
            (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                (kinase D-interacting substance, 220 kDa; compns. and methods for
                 treating   and diagnosing chronic visceral hypersensitivity and
                irritable bowel syndrome, based on gene or protein expression profiles)
     IT   Proteins
            RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
            (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                (late gestation lung protein 1; compns. and methods for
                 treating   and diagnosing chronic visceral hypersensitivity and
                irritable bowel syndrome, based on gene or protein expression profiles)
     IT   Proteins
            RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
            (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                (latexin; compns. and methods for   ***treating***   and diagnosing
                chronic visceral hypersensitivity and irritable bowel syndrome, based
                on gene or protein expression profiles)
     IT   Proteins
            RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
            (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                (lipocalin 2; compns. and methods for   ***treating***   and diagnosing
                chronic visceral hypersensitivity and irritable bowel syndrome, based
                on gene or protein expression profiles)

IT   Gene expression profiles, animal
        (mRNA expression profiles; compns. and methods for   ***treating***
        and diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Agglutinins and Lectins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (macrophage galactose N-acetylgalactosamine-specific; compns. and
        methods for   ***treating***   and diagnosing chronic visceral
        hypersensitivity and irritable bowel syndrome, based on gene or protein
        expression profiles)
IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (macrophage-expressed gene 1; compns. and methods for   ***treating***
        and diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (matrix, Gla; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (membrane, lysosomal-assocd., 1; compns. and methods for
         treating   and diagnosing chronic visceral hypersensitivity and
        irritable bowel syndrome, based on gene or protein expression profiles)
IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (membrane, vesicle-assocd. 8 (endobrevin); compns. and methods for
         treating   and diagnosing chronic visceral hypersensitivity and
        irritable bowel syndrome, based on gene or protein expression profiles)
IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (milk fat globule-EGF factor 8 protein; compns. and methods for
         treating   and diagnosing chronic visceral hypersensitivity and
        irritable bowel syndrome, based on gene or protein expression profiles)
IT   Diagnosis
        (mol.; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Transport proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (monocarboxylate transporter; compns. and methods for   ***treating***
        and diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (myxovirus (influenza virus) resistance 2; compns. and methods for
         treating   and diagnosing chronic visceral hypersensitivity and
        irritable bowel syndrome, based on gene or protein expression profiles)

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IT   Gene, animal
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (myxovirus resistance 2; compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Proteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (neurofibromatosis 2; compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Proteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (neurogranins; compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Proteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (neuronatin; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Glycoproteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (nmb (transmembrane); compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Glycoproteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (nuclear pore membrane; compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   DNA sequences
        (of CVH-related genes; compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Protein sequences
        (of CVH-related proteins; compns. and methods for   ***treating***
        and diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Molecular association
        (of binding agent to expressed polypeptide; compns. and methods for
         ***treating***   and diagnosing chronic visceral hypersensitivity and
        irritable bowel syndrome, based on gene or protein expression profiles)
IT   Disease models
        (of chronic visceral hypersensitivity in rats; compns. and methods for
         ***treating***   and diagnosing chronic visceral hypersensitivity and
        irritable bowel syndrome, based on gene or protein expression profiles)
IT   Gene, animal
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (oncogene, Fyn; compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
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syndrome, based on gene or protein expression profiles)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (oncogene, v-ets erythroblastosis virus E26, homolog 1; compns. and
          methods for   ***treating***   and diagnosing chronic visceral
          hypersensitivity and irritable bowel syndrome, based on gene or protein
          expression profiles)
IT   Growth factor receptors
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (opioid; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
IT   Antigens
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (p24; compns. and methods for   ***treating***   and diagnosing chronic
          visceral hypersensitivity and irritable bowel syndrome, based on gene
          or protein expression profiles)
IT   Calcium-binding proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (parvalbumin; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
IT   Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (parvin .alpha.; compns. and methods for   ***treating***   and
          diagnosing chronic visceral hypersensitivity and irritable bowel
          syndrome, based on gene or protein expression profiles)
IT   Transport proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (peptide/histidine transporter 2; compns. and methods for
           treating   and diagnosing chronic visceral hypersensitivity and
          irritable bowel syndrome, based on gene or protein expression profiles)
IT   Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (peptidylprolyl isomerase C-assocd.; compns. and methods for
           treating   and diagnosing chronic visceral hypersensitivity and
          irritable bowel syndrome, based on gene or protein expression profiles)
IT   Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (period homolog 2; compns. and methods for   ***treating***   and
          diagnosing chronic visceral hypersensitivity and irritable bowel
          syndrome, based on gene or protein expression profiles)
IT   Transport proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (phospholipid scramblase; compns. and methods for   ***treating***
          and diagnosing chronic visceral hypersensitivity and irritable bowel
          syndrome, based on gene or protein expression profiles)
IT   Proteins

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        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (phosphoprotein phosphatase-inhibiting, 1; compns. and methods for
            ***treating***   and diagnosing chronic visceral hypersensitivity and
           irritable bowel syndrome, based on gene or protein expression profiles)
IT    Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (plasmolipin; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
IT    Collagens, biological studies
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (procollagens, type I, .alpha.2(I)-chain; compns. and methods for
            ***treating***   and diagnosing chronic visceral hypersensitivity and
           irritable bowel syndrome, based on gene or protein expression profiles)
IT    Collagens, biological studies
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (procollagens, type XII, .alpha.1(XII)-chain; compns. and methods for
            ***treating***   and diagnosing chronic visceral hypersensitivity and
           irritable bowel syndrome, based on gene or protein expression profiles)
IT    Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (progressive ankylosis protein; compns. and methods for
            ***treating***   and diagnosing chronic visceral hypersensitivity and
           irritable bowel syndrome, based on gene or protein expression profiles)
IT    Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (protein kinase C-binding protein Zeta1; compns. and methods for
            ***treating***   and diagnosing chronic visceral hypersensitivity and
           irritable bowel syndrome, based on gene or protein expression profiles)
IT    Gene
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (pseudogene, MHC class I RT1.O type 149 processed; compns. and methods
           for   ***treating***   and diagnosing chronic visceral hypersensitivity
           and irritable bowel syndrome, based on gene or protein expression
           profiles)
IT    Surfactant proteins (pulmonary)
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (pulmonary-assocd. protein D; compns. and methods for   ***treating***
           and diagnosing chronic visceral hypersensitivity and irritable bowel
           syndrome, based on gene or protein expression profiles)
IT    Transport proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (putative secretory pathway Ca-ATPase, SPCA2; compns. and methods for
            ***treating***   and diagnosing chronic visceral hypersensitivity and
           irritable bowel syndrome, based on gene or protein expression profiles)
IT    Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
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             (rabphilins, 3A; compns. and methods for   ***treating***   and
             diagnosing chronic visceral hypersensitivity and irritable bowel
             syndrome, based on gene or protein expression profiles)
     IT   G protein-coupled receptors
             RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
             (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                (receptor 37 (endothelin receptor type B-like); compns. and methods for
                 ***treating***   and diagnosing chronic visceral hypersensitivity and
             irritable bowel syndrome, based on gene or protein expression profiles)
     IT   Receptors
             RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
             (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                (reticulon 4 receptor; compns. and methods for   ***treating***   and
             diagnosing chronic visceral hypersensitivity and irritable bowel
             syndrome, based on gene or protein expression profiles)
     IT   Proteins
             RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
             (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                (rexo70; compns. and methods for   ***treating***   and diagnosing
             chronic visceral hypersensitivity and irritable bowel syndrome, based
             on gene or protein expression profiles)
     IT   Gene, animal
             RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
             (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                (rhoB; compns. and methods for   ***treating***   and diagnosing
             chronic visceral hypersensitivity and irritable bowel syndrome, based
             on gene or protein expression profiles)
     IT   Gene, animal
             RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
             (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                (scgn10; compns. and methods for   ***treating***   and diagnosing
             chronic visceral hypersensitivity and irritable bowel syndrome, based
             on gene or protein expression profiles)
     IT   Proteins
             RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
             (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                (schlafen 4; compns. and methods for   ***treating***   and diagnosing
             chronic visceral hypersensitivity and irritable bowel syndrome, based
             on gene or protein expression profiles)
     IT   Proteins
             RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
             (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                (schwannomin-interacting protein 1; compns. and methods for
                 ***treating***   and diagnosing chronic visceral hypersensitivity and
             irritable bowel syndrome, based on gene or protein expression profiles)
     IT   Glycoproteins
             RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
             (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                (secretory (zymogen) granule membrane glycoprotein GP2; compns. and
                methods for   ***treating***   and diagnosing chronic visceral
             hypersensitivity and irritable bowel syndrome, based on gene or protein
             expression profiles)
     IT   Transport proteins
             RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
             (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
                (solute carrier family 15-(oligopeptide transporter), member 1; compns.
                and methods for   ***treating***   and diagnosing chronic visceral
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hypersensitivity and irritable bowel syndrome, based on gene or protein
          expression profiles)
    IT   Transport proteins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (solute carrier family 2, member 2; compns. and methods for
               treating   and diagnosing chronic visceral hypersensitivity and
          irritable bowel syndrome, based on gene or protein expression profiles)
    IT   Transport proteins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (solute carrier family 2, member 4; compns. and methods for
               treating   and diagnosing chronic visceral hypersensitivity and
          irritable bowel syndrome, based on gene or protein expression profiles)
    IT   Transport proteins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (solute carrier family 21 (org. anion transporter), member 9; compns.
          and methods for   ***treating***   and diagnosing chronic visceral
          hypersensitivity and irritable bowel syndrome, based on gene or protein
          expression profiles)
    IT   Transport proteins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (solute carrier family 25 (mitochondrial adenine nucleotide
          translocator), member 4; compns. and methods for   ***treating***   and
          diagnosing chronic visceral hypersensitivity and irritable bowel
          syndrome, based on gene or protein expression profiles)
    IT   Transport proteins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (solute carrier family 28, member 2; compns. and methods for
               treating   and diagnosing chronic visceral hypersensitivity and
          irritable bowel syndrome, based on gene or protein expression profiles)
    IT   Transport proteins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (solute carrier family 39, iron-regulated; compns. and methods for
               treating   and diagnosing chronic visceral hypersensitivity and
          irritable bowel syndrome, based on gene or protein expression profiles)
    IT   Ganglion
             (spinal, S1, gene expression profiles; compns. and methods for
               treating   and diagnosing chronic visceral hypersensitivity and
          irritable bowel syndrome, based on gene or protein expression profiles)
    IT   Proteins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (stathmin-like 2; compns. and methods for   ***treating***   and
          diagnosing chronic visceral hypersensitivity and irritable bowel
          syndrome, based on gene or protein expression profiles)
    IT   Nuclear receptors
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (subfamily 1, group D, member 2; compns. and methods for
               treating   and diagnosing chronic visceral hypersensitivity and
          irritable bowel syndrome, based on gene or protein expression profiles)
    IT   Antigens

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        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (surface, thymus; compns. and methods for   ***treating***   and
           diagnosing chronic visceral hypersensitivity and irritable bowel
           syndrome, based on gene or protein expression profiles)
IT    Antigens
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (surface; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
IT    Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (synaptogyrin 1; compns. and methods for   ***treating***   and
           diagnosing chronic visceral hypersensitivity and irritable bowel
           syndrome, based on gene or protein expression profiles)
IT    Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (synaptojanin 2-binding protein; compns. and methods for
            ***treating***   and diagnosing chronic visceral hypersensitivity and
           irritable bowel syndrome, based on gene or protein expression profiles)
IT    Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (syndecanyl 1; compns. and methods for   ***treating***   and
           diagnosing chronic visceral hypersensitivity and irritable bowel
           syndrome, based on gene or protein expression profiles)
IT    Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (tapasin; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
IT    Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (tensin; compns. and methods for   ***treating***   and diagnosing
           chronic visceral hypersensitivity and irritable bowel syndrome, based
           on gene or protein expression profiles)
IT    Proteins
        RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
        (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
           (testis-specific; compns. and methods for   ***treating***   and
           diagnosing chronic visceral hypersensitivity and irritable bowel
           syndrome, based on gene or protein expression profiles)
IT    Nucleic acid hybridization
           (to CVH-related polynucleotides; compns. and methods for
            ***treating***   and diagnosing chronic visceral hypersensitivity and
           irritable bowel syndrome, based on gene or protein expression profiles)
IT    Ligands
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
        RL: ANT (Analyte)
           (to CVH-related polypeptide, small mol.; compns. and methods for
            ***treating***   and diagnosing chronic visceral hypersensitivity and
           irritable bowel syndrome, based on gene or protein expression profiles)
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IT   Antibodies and Immunoglobulins
     RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
     (to CVH-related proteins; compns. and methods for   ***treating***
     and diagnosing chronic visceral hypersensitivity and irritable bowel
     syndrome, based on gene or protein expression profiles)
IT   Polynucleotides
     RL: ANT (Analyte); ANST (Analytical study)
     (transcribed, CVH-related; compns. and methods for   ***treating***
     and diagnosing chronic visceral hypersensitivity and irritable bowel
     syndrome, based on gene or protein expression profiles)
IT   Proteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
     (transducin-like enhancer of split 3; compns. and methods for
       ***treating***   and diagnosing chronic visceral hypersensitivity and
     irritable bowel syndrome, based on gene or protein expression profiles)
IT   Proteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
     (transgelin (smooth muscle 22 protein); compns. and methods for
       ***treating***   and diagnosing chronic visceral hypersensitivity and
     irritable bowel syndrome, based on gene or protein expression profiles)
IT   Gene, animal
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
     (transgelin; compns. and methods for   ***treating***   and diagnosing
     chronic visceral hypersensitivity and irritable bowel syndrome, based
     on gene or protein expression profiles)
IT   Proteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
     (transient receptor potential-related protein, ChaK; compns. and
     methods for   ***treating***   and diagnosing chronic visceral
     hypersensitivity and irritable bowel syndrome, based on gene or protein
     expression profiles)
IT   Proteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
     (transmembrane, interferon-induced, 3-like; compns. and methods for
       ***treating***   and diagnosing chronic visceral hypersensitivity and
     irritable bowel syndrome, based on gene or protein expression profiles)
IT   Proteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
     (tricarboxylate carrier-like protein; compns. and methods for
       ***treating***   and diagnosing chronic visceral hypersensitivity and
     irritable bowel syndrome, based on gene or protein expression profiles)
IT   Gene, animal
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
     (trkA, precursor; compns. and methods for   ***treating***   and
     diagnosing chronic visceral hypersensitivity and irritable bowel
     syndrome, based on gene or protein expression profiles)
IT   Proteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
     (tumor stroma and activated macrophage protein DLM-1; compns. and
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methods for   ***treating***   and diagnosing chronic visceral
hypersensitivity and irritable bowel syndrome, based on gene or protein
expression profiles)
IT   Fibroblast growth factor receptors
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (type 3; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   5-HT receptors
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (type 5-HT2B; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Prostanoid receptors
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (type EP4; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Prostanoid receptors
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (type FP; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Collagens, biological studies
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (type I, .alpha.1(I)-chain; compns. and methods for   ***treating***
        and diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Interleukin 1 receptors
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (type I; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Collagens, biological studies
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (type III, .alpha.1(III)-chain; compns. and methods for
         treating   and diagnosing chronic visceral hypersensitivity and
        irritable bowel syndrome, based on gene or protein expression profiles)
IT   Collagens, biological studies
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (type V, .alpha.1(V)-chain; compns. and methods for   ***treating***
        and diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   Proteins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (vacuolar membrane protein, 1; compns. and methods for   ***treating***
        and diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)

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IT    Potassium channel
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (voltage-gated Kv2.1; compns. and methods for   ***treating***   and
         diagnosing chronic visceral hypersensitivity and irritable bowel
         syndrome, based on gene or protein expression profiles)
IT    Calcium channel
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (voltage-gated, .beta.3 subunit; compns. and methods for
          ***treating***   and diagnosing chronic visceral hypersensitivity and
         irritable bowel syndrome, based on gene or protein expression profiles)
IT    Calcium channel
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (voltage-gated, .gamma.-subunit-like protein; compns. and methods for
          ***treating***   and diagnosing chronic visceral hypersensitivity and
         irritable bowel syndrome, based on gene or protein expression profiles)
IT    Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (wap four-disufide core domain 1; compns. and methods for
          ***treating***   and diagnosing chronic visceral hypersensitivity and
         irritable bowel syndrome, based on gene or protein expression profiles)
IT    Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (zinc finger-contg., 111; compns. and methods for   ***treating***
         and diagnosing chronic visceral hypersensitivity and irritable bowel
         syndrome, based on gene or protein expression profiles)
IT    Proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (zinc finger-contg., RIN ZF; compns. and methods for   ***treating***
         and diagnosing chronic visceral hypersensitivity and irritable bowel
         syndrome, based on gene or protein expression profiles)
IT    Transport proteins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (zinc transporter, iron-regulated, member 1; compns. and methods for
          ***treating***   and diagnosing chronic visceral hypersensitivity and
         irritable bowel syndrome, based on gene or protein expression profiles)
IT    Hemoglobins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (.alpha. chain, 1; compns. and methods for   ***treating***   and
         diagnosing chronic visceral hypersensitivity and irritable bowel
         syndrome, based on gene or protein expression profiles)
IT    Actinins
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
         (.alpha.-actinin 4; compns. and methods for   ***treating***   and
         diagnosing chronic visceral hypersensitivity and irritable bowel
         syndrome, based on gene or protein expression profiles)
IT    Interferons
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
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(.alpha.-inducible protein 27-like; compns. and methods for
          treating   and diagnosing chronic visceral hypersensitivity and
          irritable bowel syndrome, based on gene or protein expression profiles)
  IT   Actins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (.alpha.-smooth muscle; compns. and methods for   ***treating***   and
          diagnosing chronic visceral hypersensitivity and irritable bowel
          syndrome, based on gene or protein expression profiles)
  IT   Hemoglobins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (.beta. chain, complex; compns. and methods for   ***treating***   and
          diagnosing chronic visceral hypersensitivity and irritable bowel
          syndrome, based on gene or protein expression profiles)
  IT   G proteins (guanine nucleotide-binding proteins)
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (.beta. subunit, .beta.1; compns. and methods for   ***treating***
          and diagnosing chronic visceral hypersensitivity and irritable bowel
          syndrome, based on gene or protein expression profiles)
  IT   Tubulins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (.beta.-; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
  IT   Transforming growth factors
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (.beta.2-; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
  IT   Laminins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (.beta.2; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
  IT   Integrins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (.beta.1; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
  IT   Microglobulins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (.beta.2-; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)
  IT   Tubulins
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (.beta.3-; compns. and methods for   ***treating***   and diagnosing
          chronic visceral hypersensitivity and irritable bowel syndrome, based
          on gene or protein expression profiles)

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IT   Actins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (.gamma.-, 2; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   Actins
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (.gamma.2; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   9014-01-1, Subtilisin
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (-like endoprotease; compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   9040-59-9, Cyclic nucleotide phosphodiesterase
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (1, intestinal epithelium-proliferating cell-assocd.; compns. and
        methods for   ***treating***   and diagnosing chronic visceral
        hypersensitivity and irritable bowel syndrome, based on gene or protein
        expression profiles)
IT   9003-98-9, Deoxyribonuclease
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (1, sequence homolog, 3; compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   9014-46-4, Transaldolase   9027-44-5, 3-Hydroxy-3-methylglutaryl-Coenzyme
     A synthase   142805-58-1
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (1; compns. and methods for   ***treating***   and diagnosing chronic
        visceral hypersensitivity and irritable bowel syndrome, based on gene
        or protein expression profiles)
IT   9054-89-1, Superoxide dismutase
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (2, 3; compns. and methods for   ***treating***   and diagnosing
        chronic visceral hypersensitivity and irritable bowel syndrome, based
        on gene or protein expression profiles)
IT   69106-44-1, 2'5' Oligoadenylate synthetase
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (2; compns. and methods for   ***treating***   and diagnosing chronic
        visceral hypersensitivity and irritable bowel syndrome, based on gene
        or protein expression profiles)
IT   182372-18-5, Serine/threonine kinase, 3
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (39; compns. and methods for   ***treating***   and diagnosing chronic
        visceral hypersensitivity and irritable bowel syndrome, based on gene
        or protein expression profiles)
IT   9013-66-5, Glutathione peroxidase   9025-10-9, Adenosine monophosphate
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deaminase
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(3; compns. and methods for   ***treating***   and diagnosing chronic
visceral hypersensitivity and irritable bowel syndrome, based on gene
or protein expression profiles)
IT   9001-03-0, Carbonic anhydrase   9032-67-1, Dipeptidyl peptidase
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(4; compns. and methods for   ***treating***   and diagnosing chronic
visceral hypersensitivity and irritable bowel syndrome, based on gene
or protein expression profiles)
IT   9001-77-8, Acid phosphatase
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(5; compns. and methods for   ***treating***   and diagnosing chronic
visceral hypersensitivity and irritable bowel syndrome, based on gene
or protein expression profiles)
IT   9038-14-6, Monooxygenase
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(CYP2J3; compns. and methods for   ***treating***   and diagnosing
chronic visceral hypersensitivity and irritable bowel syndrome, based
on gene or protein expression profiles)
IT   60267-61-0, Ubiquitin
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(D; compns. and methods for   ***treating***   and diagnosing chronic
visceral hypersensitivity and irritable bowel syndrome, based on gene
or protein expression profiles)
IT   9032-03-5, 5-Aminoimidazole-4-carboxamide ribonucleotide formyltransferase
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(IMP; compns. and methods for   ***treating***   and diagnosing chronic
visceral hypersensitivity and irritable bowel syndrome, based on gene
or protein expression profiles)
IT   182081-06-7   188204-73-1   190396-88-4, Glutaminase (rat liver clone
pGLN2.0)   190795-11-0   201169-71-3, Phospholipase D (rat   ***brain***
)   207754-59-4   212075-48-4   212778-59-1   214973-82-7, Transcription
factor (rat gene BMAL1)   215171-93-0   241145-46-0   263743-88-0
279268-16-5   287217-08-7   311360-87-9   311360-88-0   328592-97-8
334864-78-7   343294-63-3   343313-83-7   389092-63-1   390432-93-6
393206-40-1   396239-19-3   431964-74-8   433981-54-5   441823-43-4
459502-12-6, GenBank AAB58272   459639-42-0   462366-10-5, KPL1 (Rattus
norvegicus gene Kpl1)   483129-00-6   483183-30-8, Agrin (Rattus
norvegicus gene agrin)   483183-33-1, Agrin (Rattus norvegicus gene agrin)
483184-49-2   483187-01-5   483187-16-2   483189-64-6   483192-69-4
483193-66-4   483197-63-3   483197-79-1   483197-81-5   483199-65-1
483200-15-3   483204-53-1   483207-88-1   483208-20-4   483255-20-5
483462-04-0   483470-29-7   483473-03-6   483494-86-6   483504-37-6
483525-36-6   483530-43-4   483546-18-5   483563-25-3   483563-50-4
483584-51-6   483588-57-4   483604-52-0   483612-61-9   483628-67-7
483629-17-0, Mama (Rattus norvegicus strain Fisher)   483630-65-5
483633-55-2   483645-04-1   483647-60-5   483651-82-7   484133-86-0
484141-62-0   487605-21-0, NPW16 (Rattus norvegicus strain SD)
487606-22-4   487606-59-7   487606-70-2, Legumain (Rattus norvegicus)
487697-52-9   487697-96-1   487699-69-4   487701-09-7   487708-94-1

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      487710-83-8   487713-97-3, Protein (Rattus norvegicus gene mtp1)
      487745-25-5   487782-99-0   487783-31-3   487789-31-1   487789-35-5,
      MAWDBP (Rattus norvegicus)
      RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
      (Biological study)
          (amino acid sequence; compns. and methods for   ***treating***   and
          diagnosing chronic visceral hypersensitivity and irritable bowel
          syndrome, based on differential gene or protein expression)
IT    847720-55-2, Desmin (human)   847720-57-4, Protein (human gene PEP-19)
      847720-59-6   847720-61-0, Protein (human gene ADAMTS1)   847720-63-2,
      Protein (human gene ARGBP2)   847720-65-4, Stathmin-like 2 protein (human)
      847720-67-6, Myxovirus resistance 2 protein (human)   847720-69-8, Protein
      (human gene IRF7)   847720-71-2, Protein (human gene GBP2)   847720-73-4,
      Protein (human gene SLC28a2)   847720-75-6, Protein (human gene BDNF)
      847720-77-8   847720-79-0, Protein (human gene TREK2)   847720-81-4,
      Protein (human gene trkA)   847720-83-6, Protein (human gene ILIR1)
      847720-85-8, Protein (human gene EEF2k)   847720-87-0, Actin .gamma.-2
      (human)   847720-89-2, Myosin (human heavy chain 11)   847720-91-6,
      Protein (human gene MRCL3)   847720-93-8, Protein (human gene MRLC2)
      847720-95-0   847720-97-2, Protein (human gene HSPB1)   847720-99-4,
      Protein (human gene RIPK4)   847721-01-1   847721-03-3, Protein (human
      gene transgelin)   847721-05-5, .beta.1-Integrin (human)   847721-07-7,
      Protein (human gene Desmuslin)   847721-08-8   847721-11-3, Protein (human
      gene FBXL22)   847721-13-5, .beta.-Tubulin (human)   847721-15-7, Protein
      (human gene cig5)   847721-17-9, Protein (human gene SAMD9)   847721-19-1,
      Protein (human gene IFI27)
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (amino acid sequence; compns. and methods for   ***treating***   and
          diagnosing chronic visceral hypersensitivity and irritable bowel
          syndrome, based on gene or protein expression profiles)
IT    9001-15-4, Creatine kinase   9001-48-3, Glutathione reductase   9001-87-0,
      Phospholipase D   9007-92-5, Glucagon, biological studies   9014-19-1,
      Pyruvate carboxylase   9026-52-2, Mevalonate kinase   9026-93-1, Adenosine
      deaminase   9030-27-7, Proteins, pre-B cell colony-enhancing factor
      9031-37-2, Ceruloplasmin   9033-27-6, Isopentenyl diphosphate
      .DELTA.-isomerase   9036-21-9, CAMP Phosphodiesterase   9054-84-6,
      Xanthine dehydrogenase   9068-52-4, CGMP Phosphodiesterase   67338-98-1
      80295-40-5, Complement C2   80295-41-6, Complement C3   80295-48-3,
      Complement C4   80295-49-4, Complement C4a   82707-54-8, Membrane metallo
      endopeptidase   89800-66-8, Heparanase   90597-47-0, Peptidylglycine
      .alpha.-amidating monooxygenase   91608-96-7, Interferon-inducible
      double-stranded RNA-dependent protein kinase   116283-83-1, Elongation
      factor 2 kinase   122191-40-6, Caspase 1   124861-55-8   133876-97-8,
      Cytosolic phospholipase A2   138757-15-0, .alpha.-2 Antiplasmin
      139691-92-2, Serine protease inhibitor   140879-24-9, Proteasome
      141436-78-4   143180-74-9, Granzyme B   145809-21-8, Tissue inhibitor of
      metalloproteinase 3   149371-18-6, Legumain   172306-54-6, LIM
      motif-containing protein kinase 2   179241-78-2, Caspase-8   192333-55-4,
      Mitogen activated protein kinase, 13   194739-73-6, Mitogen-activated
      protein kinase kinase, 6   219135-82-7, Rat mast cell protease-9
      260256-85-7, Cathepsin Y   300857-36-7, RPTP-.delta.   358759-20-3,
      Cytochrome P 450 4F5   455255-76-2, Cytochrome P 450 2D18   501036-70-0,
      Cytochrome P 450 2J3
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
          (compns. and methods for   ***treating***   and diagnosing chronic
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            visceral hypersensitivity and irritable bowel syndrome, based on gene
            or protein expression profiles)
IT    64-19-7, Acetic acid, biological studies
      RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
      (Uses)
            (in CVH prodn. in rat model; compns. and methods for   ***treating***
            and diagnosing chronic visceral hypersensitivity and irritable bowel
            syndrome, based on gene or protein expression profiles)
IT    9001-47-2, Glutaminase
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (liver mitochondrial; compns. and methods for   ***treating***   and
            diagnosing chronic visceral hypersensitivity and irritable bowel
            syndrome, based on gene or protein expression profiles)
IT    188364-82-1, Neuroserpin
      RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
      (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
            (member 1; compns. and methods for   ***treating***   and diagnosing
            chronic visceral hypersensitivity and irritable bowel syndrome, based
            on gene or protein expression profiles)
IT    301167-57-7, Protein tyrosine phosphatase, type IVA
      RL:
; DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
            (member 2; compns. and methods for   ***treating***   and diagnosing
            chronic visceral hypersensitivity and irritable bowel syndrome, based
            on gene or protein expression profiles)
IT    139822-50-7    139823-28-2, GenBank M10094   139823-31-7, GenBank M24026
      139823-62-4    139843-60-0    140044-99-1, GenBank M14400    140045-02-9
      140046-17-9, GenBank J02997    140048-59-5, GenBank M23764    140072-10-2
      140298-20-0, GenBank M14137    140299-49-6    140300-79-4, GenBank M24024
      140301-30-0, GenBank M25719    140302-17-6, GenBank M34097    140302-90-5
      140321-54-6    140535-36-0, GenBank M37568    140791-65-7, DNA ( cDNA plus
      flanks)    142123-15-7    142884-17-1, DNA (Rattus norvegicus gene mtp1
      cDNA)    143321-26-0    148168-02-9    149215-12-3    149479-91-4
      151315-49-0    153770-54-8    168672-44-4    168720-03-4    169011-91-0
      172047-32-4    172200-84-9    173003-21-9    173108-30-0    173760-68-4
      179642-28-5    181545-22-2    184660-65-9    185925-72-8    187502-82-5
      188706-94-7    190551-57-6    193490-62-9    198917-93-0    200160-93-6
      200243-80-7    200836-25-5    203781-72-0    203813-01-8    203813-30-3
      203813-43-8    203817-40-7    203821-00-5    203821-22-1    203826-07-7
      203826-56-6    203826-69-1    203827-98-9    204280-73-9    204283-14-7
      204291-11-2    204291-28-1    204292-23-9    204298-89-5    204303-86-6
      205095-75-6    205099-32-7    205100-33-0    205141-71-5    205152-13-2
      205154-89-8    205332-25-8    205335-08-6    205555-88-0    205890-37-5
      205890-56-8    205891-79-8    205892-97-3    206294-91-9    206299-85-6
      206301-17-9    206305-73-9    206306-11-8    206308-98-7    206311-62-8
      206312-10-9    206313-04-4    206313-27-1    206313-45-3    206313-58-8
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      207438-91-3    207440-97-9    207475-30-7    207475-34-1    207479-22-9
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      207780-72-1    207783-87-7    207946-77-8    207947-31-7    207958-86-9
      207962-39-8    207964-63-4    208206-69-3    208229-09-8    208818-55-7
      208957-67-9    209140-46-5    209375-70-2    209382-17-2    209382-71-8
      209421-55-6    209426-19-7    209426-72-2    209430-02-4    209440-32-4
      209489-00-9    209835-98-3    210459-16-8    210463-06-2    210464-83-8
      210497-26-0    210504-68-0    210505-89-8    210506-45-9    211275-28-4
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212242-42-7   215093-48-4   217143-05-0   217146-73-1   217155-97-0
217691-15-1   217691-70-8   217694-48-9   217702-11-9   217712-39-5
217716-46-6   217720-88-2   217721-08-9   217727-15-6   217733-27-2
217742-71-7   217743-72-1   217743-89-0   217745-01-2   217746-60-6
217746-63-9   217747-89-2   217748-17-9   217752-21-1   217754-58-0
217757-63-6   217759-45-0   217761-76-7   217783-77-2   217783-93-2
217786-58-8   217908-40-2   217910-96-8   217913-12-7   217913-16-1
217916-23-9   217917-70-9   217920-15-5   217928-96-6   217930-35-3
217936-51-1   217938-56-2   217978-92-2   217981-80-1   217982-11-1
217982-60-0   217985-12-1   219023-13-9   219024-42-7   219029-25-1
219029-46-6   219030-87-2   219032-87-8   219037-53-3   219038-85-4
219048-32-5   219052-90-1   219054-23-6   219056-42-5   219064-49-0
219064-64-9   219077-67-5   219078-56-5   219081-76-2   219089-29-9
219158-82-4   219165-58-9   219170-20-4   219170-39-5   222254-46-8
223166-86-7   223166-91-4   224359-65-3   225432-90-6   226203-90-3
226204-13-3   226265-95-8   226267-16-9   226270-20-8   226272-53-3
226272-75-9   226273-39-8   226273-87-6   226278-41-7   226279-42-1
226280-58-6   226280-61-1   226281-76-1   226286-62-0   226286-77-7
226288-20-6   226291-76-5   226298-56-2   226299-68-9   226300-61-4
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226318-31-6   226320-21-4
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RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
(Biological study)
    (nucleotide sequence; compns. and methods for   ***treating***   and
    diagnosing chronic visceral hypersensitivity and irritable bowel
    syndrome, based on differential gene or protein expression)

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            syndrome, based on differential gene or protein expression)
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        (Rattus norvegicus MAWDBP cDNA)   417999-47-4   847860-69-9, GenBank
        AO010267
        RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
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           syndrome, based on differential gene or protein expression)
IT   847720-54-1, DNA (human desmin gene)   847720-56-3, DNA (human gene
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     gene ADAMTS1)   847720-62-1, DNA (human gene ARGBP2)   847720-64-3, DNA
     (human stathmin-like 2 protein gene)   847720-66-5, DNA (human myxovirus
     resistance 2 gene)   847720-68-7, DNA (human gene IRF7)   847720-70-1, DNA
     (human gene GBP2)   847720-72-3, DNA (human gene SLC28a2)   847720-74-5,
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     847720-80-3, DNA (human gene trkA)   847720-82-5, DNA (human gene ILIR1)
     847720-84-7, DNA (human gene EEF2k)   847720-86-9, DNA (human actin
     .gamma.-2 gene)   847720-88-1, DNA (human myosin heavy chain 11 gene)
     847720-90-5, DNA (human gene MRCL3)   847720-92-7, DNA (human gene MRLC2)
     847720-94-9, DNA (human Rho family GTPase 1 gene)   847720-96-1, DNA
     (human gene HSPB1)   847720-98-3, DNA (human gene RIPK4)   847721-00-0
     847721-02-2, DNA (human gene transgelin)   847721-04-4, DNA (human
     .beta.1-Integrin gene)   847721-06-6, DNA (human gene Desmuslin)
     847721-09-9   847721-10-2, DNA (human gene FBXL22)   847721-12-4, DNA
     (human .beta.-tubulin)   847721-14-6, DNA (human gene cig5)   847721-16-8,
     DNA (human gene SAMD9)   847721-18-0, DNA (human gene IFI27)
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (nucleotide sequence; compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   9015-81-0, 17 .beta. Hydroxysteroid dehydrogenase
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (oxidative type 6; compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   330207-52-8, Cytochrome P450 4B
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (polypeptide 1; compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   59298-90-7, UDP-galactose:glucosylceramide .beta.1,4-galactosyltransferase
     RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (polypeptide 6; compns. and methods for   ***treating***   and
        diagnosing chronic visceral hypersensitivity and irritable bowel
        syndrome, based on gene or protein expression profiles)
IT   362479-32-1, Protein phosphatase 1
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     (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (regulatory (inhibitor) subunits 1B, 14a; compns. and methods for
         ***treating***   and diagnosing chronic visceral hypersensitivity and
        irritable bowel syndrome, based on gene or protein expression profiles)
IT   80295-32-5, Complement C1
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          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
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             diagnosing chronic visceral hypersensitivity and irritable bowel
             syndrome, based on gene or protein expression profiles)
    IT    9033-53-8, Retinol dehydrogenase
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (sequence homolog; compns. and methods for   ***treating***   and
             diagnosing chronic visceral hypersensitivity and irritable bowel
             syndrome, based on gene or protein expression profiles)
    IT    79-17-4, Hydrazinecarboximidamide   164301-51-3, CNI1493
          RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (therapeutic compn. comprising; compns. and methods for
              ***treating***   and diagnosing chronic visceral hypersensitivity and
             irritable bowel syndrome, based on gene or protein expression profiles)
    IT    75536-80-0, Peptidylarginine deiminase
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (type 4; compns. and methods for   ***treating***   and diagnosing
             chronic visceral hypersensitivity and irritable bowel syndrome, based
             on gene or protein expression profiles)
    IT    246518-54-7, Nudix hydrolase
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (type II diphosphoinositol polyphosphate phosphohydolase; compns. and
             methods for   ***treating***   and diagnosing chronic visceral
             hypersensitivity and irritable bowel syndrome, based on gene or protein
             expression profiles)
    IT    135371-29-8, Protein geranylgeranyltransferase
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (type-I (GGTase-I); compns. and methods for   ***treating***   and
             diagnosing chronic visceral hypersensitivity and irritable bowel
             syndrome, based on gene or protein expression profiles)
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          847725-37-5
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             (unclaimed sequence; compns. and methods for   ***treating***   and
             diagnosing chronic visceral hypersensitivity and irritable bowel
             syndrome, based on differential gene or protein expression)
    IT    50812-37-8, Glutathione S-transferase
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (.alpha. 1, mu type 3-(Yb3); compns. and methods for   ***treating***
             and diagnosing chronic visceral hypersensitivity and irritable bowel
             syndrome, based on gene or protein expression profiles)
    IT    60382-71-0, Diacylglycerol kinase
          RL: BSU (Biological study, unclassified); DGN (Diagnostic use); PRP
          (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
             (.beta.; compns. and methods for   ***treating***   and diagnosing
             chronic visceral hypersensitivity and irritable bowel syndrome, based
             on gene or protein expression profiles)
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AN   2004:1127487   CAPLUS <<LOGINID::20090423>>
DN   142:72870
TI   Gene expression profiles in airway epithelium and their use as signatures
       for diagnosing disorders of the lung
IN   Brody, Jerome S.; Spira, Avrum; Shah, Nila; Palma, John F.
PA   Trustees of Boston University, USA; Affymetrix, Inc.
SO   PCT Int. Appl., 105 pp.
       CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004111197	A2	20041223	WO 2004-US18492	20040610
	WO 2004111197	A3	20060720		

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          RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
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              SN, TD, TG
PRAI US 2003-477218P   P   20030610
     US 2003-483387P   P   20030627
     US 2003-497599P   P   20030825
AB   A minimally invasive sample procurement method for obtaining airway
       epithelial cell RNA that can be analyzed by expression profiling, e.g., by
       array-based gene expression profiling, is disclosed. These methods can be
       used to identify patterns of gene expression that are diagnostic of lung
       disorders, e.g., cancer, to identify subjects at risk for developing lung
       disorders and to custom design an array, e.g., a microarray, for the
       diagnosis or prediction of lung disorders or   ***susceptibility***   to
       lung disorders. Arrays and informative genes are also disclosed for this
       purpose.
RE.CNT 2   THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
AB   . . . lung disorders and to custom design an array, e.g., a microarray,
       for the diagnosis or prediction of lung disorders or
        susceptibility   to lung disorders. Arrays and informative genes
       are also disclosed for this purpose.
IT   Gene, animal
       RL: DGN (Diagnostic use); PRP (Properties); BIOL (Biological study); USES
       (Uses)
          (***DMBT1*** ; gene expression profiles in airway epithelium and
          their use as signatures for diagnosing disorders of lung)
IT   9012-42-4, Adenylate cyclase
       RL: DGN (Diagnostic use); PRP (Properties); BIOL (Biological study); USES
       (Uses)
          (***brain***   isoenzyme, gene for; gene expression profiles in
          airway epithelium and their use as signatures for diagnosing disorders
          of lung)

AN   2004:371153   CAPLUS <<LOGINID::20090423>>
DN   140:371494
TI   Binary prediction tree modeling with many predictors and its uses in
      clinical and genomic applications
IN   Nevins, Joseph R.; West, Mike; Huang, Andrew T.
PA   Duke University, USA
SO   PCT Int. Appl., 886 pp.
      CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004038376	A2	20040506	WO 2003-US33946	20031024
	WO 2004038376	A3	20040826		

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              OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
              TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
          RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
              KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
              FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
              BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	AU 2003290537	A1	20040513	AU 2003-290537	20031024
	US 20050170528	A1	20050804	US 2003-692002	20031024
	EP 1579383	A2	20050928	EP 2003-783074	20031024

          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

PRAI	US 2002-420729P	P	20021024		
	US 2002-421062P	P	20021025		
	US 2002-421102P	P	20021025		
	US 2002-424701P	P	20021108		
	US 2002-424715P	P	20021108		
	US 2002-424718P	P	20021108		
	US 2002-425256P	P	20021112		
	US 2003-448461P	P	20030221		
	US 2003-448462P	P	20030221		
	US 2003-457877P	P	20030327		
	US 2003-458373P	P	20030331		
	WO 2003-US33946	W	20031024		

AB   The statistical anal. described and claimed is a predictive statistical
      tree model that overcomes several problems obsd. in prior statistical
      models and regression analyses, while ensuring greater accuracy and
      predictive capabilities. Although the claimed use of the predictive
      statistical tree model described herein is directed to the prediction of a
      disease in individuals, the claimed model can be used for a variety of
      applications including the prediction of disease states,
       susceptibility   of disease states or any other biol. state of
      interest, as well as other applicable non-biol. states of interest. This
      model first screens genes to reduce noise, applies kmeans
      correlation-based clustering targeting a large no. of clusters, and then
      uses singular value decompns. (SVD) to ext. the single dominant factor
      (principal component) from each cluster. This generates a statistically
      significant no. of cluster-derived singular factors, that are referred to

as metagenes, that characterize multiple patterns of expression of the genes across samples. The strategy aims to ext. multiple such patterns while reducing dimension and smoothing out gene-specific noise through the aggregation within clusters. Formal predictive anal. then uses these metagenes in a Bayesian classification tree anal. This generates multiple recursive partitions of the sample into subgroups (the 'leaves' of the classification tree), and assocs. Bayesian predictive probabilities of outcomes with each subgroup. Overall predictions for an individual sample are then generated by averaging predictions, with appropriate wts., across many such tree models. The model includes the use of iterative out-of-sample, cross-validation predictions leaving each sample out of the data set one at a time, refitting the model from the remaining samples and using it to predict the hold-out case. This rigorously tests the predictive value of a model and mirrors the real-world prognostic context where prediction of new cases as they arise is the major goal.

AB   . . . disease in individuals, the claimed model can be used for a variety of applications including the prediction of disease states, ***susceptibility***   of disease states or any other biol. state of interest, as well as other applicable non-biol. states of interest. This. . .

IT   213260-57-2   213325-40-7   213539-29-8   213539-33-4   213761-98-9, Protein (human gene SOLH)   214145-60-5   214282-68-5   214550-32-0, Ksp-cadherin (human gene CDH16)   214550-97-7   214609-83-3   214688-59-2   214909-74-7   215380-38-4   216017-43-5   216148-42-4   216148-46-8, KIAA0714 protein (human gene KIAA0714)   216148-50-4, KIAA0715 protein (human gene KIAA0715)   216148-53-7, KIAA0716 protein (human gene KIAA0716)   216148-97-9, KIAA0721 protein (human gene KIAA0721)   216149-41-6, KIAA0723 protein (human gene KIAA0723)   216149-50-7, KIAA0724 protein (human gene KIAA0724)   216149-83-6, KIAA0725 protein (human gene KIAA0725)   216149-93-8, KIAA0726 protein (human gene KIAA0726)   216150-24-2, KIAA0727 protein (human gene KIAA0727)   216150-39-9, KIAA0728 protein (human gene KIAA0728)   216150-58-2, KIAA0731 protein (human gene KIAA0731)   216150-64-0, KIAA0733 protein (human gene KIAA0733)   216150-68-4, KIAA0734 protein (human gene KIAA0734)   216150-75-3, KIAA0736 protein (human gene KIAA0736)   216150-78-6, KIAA0737 protein (human gene KIAA0737)   216151-04-1, KIAA0739 protein (human gene KIAA0739)   216151-15-4, KIAA0740 protein (human gene KIAA0740)   216151-19-8, KIAA0741 protein (human gene KIAA0741)   216151-23-4, KIAA0742 protein (human gene KIAA0742)   216151-48-3, KIAA0745 protein (human gene KIAA0745)   216151-57-4, KIAA0746 protein (human gene KIAA0746)   216151-63-2, KIAA0747 protein (human gene KIAA0747)   216151-79-0, KIAA0750 protein (human gene KIAA0750)   216151-85-8, KIAA0751 protein (human gene KIAA0751)   216152-28-2, KIAA0759 protein (human gene KIAA0759)   216152-49-7, KIAA0763 protein (human gene KIAA0763)   216152-67-9, KIAA0766 protein (human gene KIAA0766)   216152-87-3, KIAA0771 protein (human gene KIAA0771)   216153-24-1, KIAA0775 protein (human gene KIAA0775)   216153-28-5, Protein KIAA0776 (human gene KIAA0776)   216153-45-6, KIAA0779 protein (human gene KIAA0779)   216153-65-0, KIAA0782 protein (human gene KIAA0782)   216153-75-2, KIAA0784 protein (human gene KIAA0784)   216154-02-8, KIAA0788 protein (human gene KIAA0788)   216154-23-3, KIAA0791 protein (human gene KIAA0791)   216154-29-9, KIAA0792 protein (human gene KIAA0792)   216154-43-7, KIAA0795 protein (human gene KIAA0795)   216154-44-8, KIAA0796 protein (human gene KIAA0796)   216154-51-7, KIAA0799 protein (human gene KIAA0799)   216154-60-8, KIAA0801 protein (human gene KIAA0801)   216154-63-1, KIAA0802 protein (human gene KIAA0802)   216154-71-1, KIAA0804 protein

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216972-91-7 217638-83-0 217642-22-3 217798-42-0 217945-50-1
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C-terminal kinesin KIFC3 (human) 218442-46-7 218615-97-5, Synaptogyrin
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220136-14-1, Connexin 31.1 (human gene GJB5) 220140-23-8, Protein (human
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Protein (human clone CosWSTF gene WSTF) 220380-64-3 220455-03-8
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229473-85-2, Lysozyme (human clone BAC hCIT.110-F-6) 232269-01-1,

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        (human ZR75 cell gene PLU-1)   235426-34-3   235432-21-0   235768-58-8,
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        236394-38-0, Protein (human clone pPL1 gene TML1)   236738-05-9, Protein
        (human gene HGC6.3)   237416-85-2   238080-32-5   238402-73-8
        239116-91-7   240797-24-4   240802-22-6, BAIAP2-.beta. protein (human)
        241143-47-5   242468-48-0   243135-88-8   243658-22-2, Apyrase (human
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        RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
        (Biological study)
           (amino acid sequence; binary prediction tree modeling with many
           predictors and its uses in clin. and genomic applications)
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(human gene GPR39 cDNA)
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
(Biological study)
    (nucleotide sequence; binary prediction tree modeling with many
    predictors and its uses in clin. and genomic applications)

L28   ANSWER 17 OF 22   CAPLUS   COPYRIGHT 2009 ACS on STN
AN   2004:39697   CAPLUS <<LOGINID::20090423>>
DN   140:123703
TI   Human prostate cancer marker genes associated with various metastatic
      stages identified by gene profiling, and related compositions, kits, and
      methods for diagnosis, prognosis and therapy
IN   Schlegel, Robert; Endege, Wilson O.
PA   Millennium Pharmaceuticals, Inc., USA
SO   U.S. Pat. Appl. Publ., 131 pp.
      CODEN: USXXCO
DT   Patent
LA   English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20040009481	A1	20040115	US 2002-166883	20020611
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	US 20040009481	A1	20040115	US 2002-166883	20020611
	US 20040009481	A1	20040115	US 2002-166883	20020611
PRAI	US 2001-297285P	P	20010611		
	US 2002-166883	A	20020611		

AB   The invention relates to compns., kits, and methods for diagnosing,
      staging, prognosing, monitoring and   ***treating***   human prostate
      cancers. A variety of marker genes are provided, wherein changes in the
      levels of expression of one or more of the marker genes is correlated with
      the presence of prostate cancer. In particular, three sets of the marker
      genes set, corresponding to 11617 GenBank Accession Nos. (only 2168 new
      submissions) and 15 SEQ IDs, are identified by transcription profiling
      using RNA derived from clin. samples, that were expressed at least 2-fold
      or greater than the normal controls. Using TNM staging approach, these

markers are divided to three groups, ones can be used to det. whether
prostate cancer has metastasized, or is likely to metastasize, to the
liver (M stage); ones can be used to det. whether prostate cancer has
metastasized, or is likely to metastasize, to the bone (M stage); and ones
can be used to det. whether prostate cancer has metastasized, or is likely
to metastasize, to the lymph nodes (N stage and/or M stage). The
invention also relates to a kit for assessing the specific type of
metastatic prostate cancer, e.g., cancer that has metastasized to the
liver, bone or lymph nodes. [This abstr. record is one of three records
for this document necessitated by the large no. of index entries required
to fully index the document and publication system constraints.].

AB   The invention relates to compns., kits, and methods for diagnosing,
staging, prognosing, monitoring and   ***treating***   human prostate
cancers. A variety of marker genes are provided, wherein changes in the
levels of expression of one or. . .

IT   97003-30-0, Protein S 11 (rat ribosome reduced)   151595-82-3, Protein
(human DEAD box reduced)   154767-47-2, Protein (human gene RSU1)
157298-17-4   161736-39-6, Ferritin (human L-chain)   161736-56-7, Protein
(human 123-amino acid)   162063-82-3   164639-53-6, Protein (human KG-1
cell 631-amino acid)   167362-03-0, Protein S 10 (human ribosome)
176634-85-8, Protein (human gene FRG1)   178360-63-9   181055-30-1
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191878-86-1   191879-09-1   191879-29-5   191879-31-9   191879-44-4
191879-45-5, Protein p120 (human clone HH0733)   191879-49-9
191879-50-2, Myosin VI (human clone HJ0061)   192080-64-1   192949-81-8,
Protein (human gene ATM)   194880-79-0   195009-88-2   198582-99-9,
Repressor (human gene CHD1)   198583-00-5, Repressor (human gene CHD2)
200662-22-2, Protein (human gene BICD1)   203674-18-4   203745-59-9
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Protein (human clone P16C2 gene PRED3)   268722-86-7   268723-01-9
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295808-36-5   295808-55-8   295808-71-8   299467-20-2, Protein CGI-126
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304026-70-8   305384-91-2   307003-79-8, Protein (human gene FOR fragment)
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RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
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vector)   480069-11-2, Alpha-tubulin (human clone hum-a-tub2)
480072-26-2, BC319430_5 (human clone CTC-440L2)   480072-27-3, BC319430_7
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Protein (human 127-amino acid)   480123-45-3, Protein (human 172-amino
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RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
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RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
(Biological study)
    (nucleotide sequence; human prostate cancer marker genes assocd. with
    metastatic stages identified by gene profiling, and related compns.,
    kits, and methods for diagnosis, prognosis and therapy)

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AN   2003:942764 CAPLUS <<LOGINID::20090423>>
DN   140:3792
TI   Genes expressed in atherosclerotic tissue and their use in diagnosis and
     pharmacogenetics
IN   Nevins, Joseph; West, Mike; Goldschmidt, Pascal
PA   Duke University, USA
SO   PCT Int. Appl., 408 pp.

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DT    Patent
LA    English
FAN.CNT 5
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             MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
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             FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF,
             CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRAI  US 2002-374547P      P       20020423
      US 2002-420784P      P       20021024
      US 2002-421043P      P       20021025
      US 2002-424680P      P       20021108
      WO 2002-US38221      A       20021112
AB    Genes whose expression is correlated with an determinant of an
      atherosclerotic phenotype are provided.  Also provided are methods of
      using the subject atherosclerotic determinant genes in diagnosis and
       ***treatment***   methods, as well as drug screening methods.  In addn.,
      reagents and kits thereof that find use in practicing the subject methods
      are provided.  Also provided are methods of detg. whether a gene is
      correlated with a disease phenotype, where correlation is detd. using a
      Bayesian anal.
AB    .  .  .  of an atherosclerotic phenotype are provided.  Also provided are
      methods of using the subject atherosclerotic determinant genes in
      diagnosis and   ***treatment***   methods, as well as drug screening
      methods.  In addn., reagents and kits thereof that find use in practicing
      the subject.  .  .
IT    Angioplasty
      Surgery
         (in   ***treatment***    of atherosclerosis, genotyping in selection of;
         genes expressed in atherosclerotic tissue and their use in diagnosis
         and pharmacogenetics)
IT      ***Susceptibility***    (genetic)
         (to atherosclerosis; genes expressed in atherosclerotic tissue and
         their use in diagnosis and pharmacogenetics)
IT    213260-57-2    213475-55-9    213539-29-8    213539-33-4    213761-98-9,
      Protein (human gene SOLH)    213910-92-0    213910-98-6    214282-68-5
      214550-97-7    214689-24-4    214909-74-7    215111-51-6, Protein MOCS1A
      (human gene MOCS1)    215111-52-7, Protein MOCS1B (human gene MOCS1)
      215169-98-5    215377-99-4    215865-23-9    216017-43-5    216148-46-8,
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KIAA0714 protein (human gene KIAA0714) 216148-60-6, KIAA0717 protein (human gene KIAA0717) 216150-72-0, KIAA0735 protein (human gene KIAA0735) 216150-75-3, KIAA0736 protein (human gene KIAA0736) 216151-79-0, KIAA0750 protein (human gene KIAA0750) 216152-12-4, KIAA0756 protein (human gene KIAA0756) 216152-73-7, KIAA0767 protein (human gene KIAA0767) 216153-18-3, KIAA0774 protein (human gene KIAA0774) 216153-24-1, KIAA0775 protein (human gene KIAA0775) 216153-28-5, Protein KIAA0776 (human gene KIAA0776) 216153-45-6, KIAA0779 protein (human gene KIAA0779) 216153-75-2, KIAA0784 protein (human gene KIAA0784) 216153-95-6, Protein KIAA0787 (human gene KIAA0787) 216154-29-9, KIAA0792 protein (human gene KIAA0792) 216154-43-7, KIAA0795 protein (human gene KIAA0795) 216154-45-9, KIAA0797 protein (human gene KIAA0797) 216154-95-9, KIAA0809 protein (human gene KIAA0809) 216495-85-1 216588-71-5 216766-54-0, Protein (human gene ZPR1) 216972-91-7 217798-42-0 218136-85-7 218442-46-7 218613-07-1 218781-96-5 218914-16-0 219781-67-6 219943-68-7 220073-39-2 220132-83-2, Protein (human gene APCL) 220136-14-1, Connexin 31.1 (human gene GJB5) 220276-48-2 220380-64-3 221224-22-2, Protein (human ***brain*** gene BCL7B) 221269-86-9 221376-14-3 221546-82-3 222963-14-6 222963-19-1 222963-21-5 222963-25-9 222963-29-3, Protein (human ***brain*** gene KIAA0834) 222963-37-3 222963-38-4, Protein (human ***brain*** gene KIAA0843) 222963-46-4, Protein (human ***brain*** gene KIAA0851) 222963-51-1 222963-55-5, Protein (human ***brain*** gene KIAA0860) 222963-57-7, Protein (human ***brain*** gene KIAA0862) 222963-59-9 222963-65-7, Protein (human ***brain*** gene KIAA0870) 222963-75-9 222964-01-4, Protein (human ***brain*** gene KIAA0890) 222964-02-5 222964-04-7, Protein (human ***brain*** gene KIAA0893) 222964-15-0 222964-24-1 222964-26-3, Protein (human ***brain*** gene KIAA0915) 223915-67-1, Protein (human clone pLy-2 gene ATP-BL) 226069-32-5, Protein (human placenta gene SLC7A8) 226888-25-1 226888-43-3 226888-78-4, KIAA0941 protein (human clone hh04956) 226888-87-5, KIAA0945 protein (human clone hj04760) 226888-89-7 226888-91-1 226888-95-5 226888-97-7, KIAA0952 protein (human clone hj05359) 226889-11-8 226889-21-0 226889-23-2, KIAA0963 protein (human clone hj05936) 226889-33-4, KIAA0970 protein (human clone hj06711) 226890-16-0 226890-19-3 226890-20-6, KIAA0982 protein (human clone hj07125) 226890-25-1 226890-31-9 226890-37-5, KIAA0996 protein (human clone hk07913) 226894-11-7 226894-13-9, KIAA1012 protein (human clone hj06464) 226894-14-0 226894-15-1 226894-32-2 229161-10-8 234764-80-8 234765-15-2 235095-26-8, Protein (human ZR75 cell gene PLU-1) 235768-58-8, TOM1-like protein (human gene tom1-like) 240797-24-4 244060-46-6 244204-24-8 244204-25-9 244204-30-6 244204-58-8 244204-59-9 244204-63-5 244204-67-9 244204-84-0 244204-95-3 244204-98-6 244205-36-5 244205-47-8 244205-54-7 244206-35-7 244229-95-6, Embryonic lung protein (human gene HUEL) 245356-92-7 246242-89-7 248909-93-5 250349-49-6 252903-36-9 252903-37-0 252903-47-2 252907-12-3 252907-14-5 252907-24-7 252907-26-9 252907-28-1 252907-29-2 252907-30-5 252907-31-6 252907-32-7 253137-89-2 253138-10-2 253143-56-5 253143-57-6 253145-07-2 253145-08-3 253145-09-4 253145-94-7 253145-95-8 253146-10-0 253146-11-1 253146-25-7 253146-26-8 253146-34-8 253146-36-0 253146-45-1 253146-54-2 253146-56-4 253146-57-5 253146-58-6 253146-60-0 253146-61-1 253146-62-2 253146-63-3 253146-91-7 253147-09-0 253147-10-3 253147-11-4 253147-18-1 253147-45-4 253147-46-5 253147-47-6 253147-48-7 253147-49-8 253147-50-1 253147-51-2 253147-52-3 253188-74-8 253278-21-6 253755-61-2 253834-33-2 258852-90-3

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340323-28-6, GTP-binding protein (human CD34+ cell)   340323-29-7
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385849-61-6   385849-62-7, Interleukin 1 receptor (human)   385849-64-9
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RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
    (amino acid sequence; genes expressed in atherosclerotic tissue and their use in diagnosis and pharmacogenetics)
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384464-24-8   384465-62-7   384465-75-2   384465-85-4, DNA (human gene K-ras ras protein cDNA)   384466-28-8   384471-33-4, DNA (human gene hsp-D)   384471-97-0, DNA (human gene SSRP1 cDNA)   384473-36-3
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384765-59-7, DNA (human gene SCL cDNA)   384765-62-2, DNA (human clone
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gene IKK alpha cDNA)   384784-58-1, DNA (human gene   ***DMBT1***   cDNA)
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RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
(Biological study)

L28   ANSWER 19 OF 22   CAPLUS   COPYRIGHT 2009 ACS on STN
AN   2001:828415   CAPLUS <<LOGINID::20090423>>
DN   137:89412
TI   Detection of variations in the DNA methylation profile of genes in the
      determining the risk of disease
IN   Berlin, Kurt; Piepenbrock, Christian; Olek, Alexander
PA   Epigenomics A.-G., Germany
SO   PCT Int. Appl., 636 pp.
      CODEN: PIXXD2
DT   Patent
LA   German
FAN.CNT 69
      PATENT NO.   KIND   DATE   APPLICATION NO.   DATE
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      ES 2272636   T3   20070501   ES 2002-90203   20020605
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      AU 2003204553   A1   20040108   AU 2003-204553   20030605
      AU 2003204553   B2   20071129
      JP 2004008217   A   20040115   JP 2003-160375   20030605
      US 20040023279   A1   20040205   US 2003-455212   20030605
      AU 2006203475   A1   20060831   AU 2006-203475   20060811
      AU 2006213968   A1   20061019   AU 2006-213968   20060915
      AU 2006225250   A1   20061026   AU 2006-225250   20061005
PRAI DE 2000-10019058   A   20000406
      WO 2001-DE1486   W   20010406
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       AU 2001-276331       A3     20010406
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       EP 2001-969303       A3     20010406
       WO 2001-EP4016       W      20010406
       EP 2002-90203        A      20020605
       AU 2006-230475       A      20060811
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AB   The invention relates to an oligonucleotide kit as probe for the detection
      of relevant variations in the DNA methylation of a target group of genes.
      The invention further relates to the use of the same for detg. the gene
      variant with regard to DNA methylation, a medical device, using an
      oligonucleotide kit, a method for detg. the methylation state of an
      individual and a method for the establishment of a model for establishing
      the probability of onset of a disease state in an individual. Such
      diseases may be: undesired pharmaceutical side-effects; cancerous
      diseases; CNS dysfunctions, injuries or diseases; aggressive symptoms or
      relational disturbances; clin., psychol. and social consequences of
        brain   injury; psychotic disorders and personality disorders;
      dementia and/or assocd. syndromes; cardiovascular disease, dysfunction and
      damage; dysfunction, damage or disease of the gastrointestinal tract;
      dysfunction, damage or disease of the respiratory system; injury,
      inflammation, infection, immunity and/or anastasis; dysfunction, damage or
      disease of the body as an abnormal development process; dysfunction,
      damage or disease of the skin, muscle, connective tissue or bones;
      endocrine and metabolic dysfunction, damage or disease; headaches or
      sexual dysfunction. This abstr. record is one of several records for this
      document necessitated by the large no. of index entries required to fully
      index the document and publication system constraints.
AB   . . .   pharmaceutical side-effects; cancerous diseases; CNS
      dysfunctions, injuries or diseases; aggressive symptoms or relational
      disturbances; clin., psychol. and social consequences of   ***brain***
      injury; psychotic disorders and personality disorders; dementia and/or
      assocd. syndromes; cardiovascular disease, dysfunction and damage;
      dysfunction, damage or disease of. . .
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
ST   DNA methylation assay disease   ***susceptibility***   detn
IT   Cadherins
      Synaptobrevins
      Syndecans
      Syntaxins
      Uncoupling protein
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (1, DNA methylation profiles in gene   ***for***   ***and***
          disease   ***susceptibility*** ; detection of variations in DNA
            methylation   profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (1PC, DNA methylation profiles and disease   ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Cadherins
      Nexins
      Presenilins

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        Synaptobrevins
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
            (2, DNA methylation profiles in gene for   ***and***   disease
             ***susceptibility***  ; detection of variations in DNA methylation
            profile of genes in detg. risk of disease)
IT   Cadherins
     Cyclin dependent kinase inhibitors
     P-glycoproteins
     Tropomyosins
     Uncoupling protein
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
            (3, DNA methylation profiles   ***in***   gene   ***for***
             ***and***   disease   ***susceptibility***  ; detection of variations
            in DNA methylation profile of genes in detg. risk of disease)
IT   Laminins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
            (5, DNA methylation profiles in gene for   ***and***   disease
             ***susceptibility***  ; detection of variations in DNA methylation
            profile of genes in detg. risk of disease)
IT   Proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
            (95 kDa, postsynaptic d., DNA methylation profiles   ***in***   gene
            for and disease   ***susceptibility***  ; detection of variations in
            DNA methylation profile of genes in detg. risk of disease)
IT   Chromogranins
     Cyclins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
            (A, DNA methylation profiles in gene for   ***and***   disease
             ***susceptibility***  ; detection of variations in DNA methylation
            profile of genes in detg. risk of disease)
IT   Apolipoproteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
            (A-I, DNA methylation profiles in gene   ***for***   and disease
            susceptibility; detection of variations in DNA methylation profile of
            genes in detg. risk of disease)
IT   Apolipoproteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
            (A-II, DNA methylation profiles in gene for and disease
             ***susceptibility***  ; detection of variations in DNA methylation
            profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (A2M, DNA methylation profiles and disease   ***susceptibility***  ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT   Gene, animal
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
            (AAEMX1, DNA methylation profiles in gene   ***for***   and disease
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           ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT    Transport proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
           (ABC (ATP-binding cassette) transporters, ABCC7, DNA methylation
           profiles  ***in***   gene for and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ABC7, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ABCR, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ABO, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ACAA, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ACADL, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ACADM, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ACADS, DNA methylation profiles and disease susceptibility; detection
            ***of***   variations in DNA methylation profile of genes in detg.
risk
           of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ACAT2, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
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              risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ACE, DNA methylation profiles in and   ***disease***
          ***susceptibility***  ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ACTN3, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ACVR2B, DNA methylation profiles in and disease   ***susceptibility***
         ; detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ACVRL1, DNA methylation profiles in and disease   ***susceptibility***
         ; detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (ADCX, DNA methylation profiles in gene   ***for***   and disease
          ***susceptibility***  ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ADD1, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ADD2 DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ADH1C, DNA methylation profiles in and   ***disease***
         susceptibility; detection of variations in DNA methylation profile of
         genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ADHR, DNA methylation profiles in and   ***disease***
          ***susceptibility***  ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
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         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (ADTB3A, DNA methylation profiles and disease   ***susceptibility***  ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT     Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (AGA, DNA methylation profiles and disease   ***susceptibility***  ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT     Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (AGL, DNA methylation profiles and disease   ***susceptibility***  ;
             ***detection***   of variations in DNA methylation profile of genes in
            detg. risk of disease)
IT     Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (AGT, DNA methylation profiles in and disease   ***susceptibility***  ;
            detection of variations in DNA   ***methylation***   profile of genes
            in detg. risk of disease)
IT     Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (AIF, DNA methylation profiles and disease   ***susceptibility***  ;
             ***detection***   of variations in DNA methylation profile of genes in
            detg. risk of disease)
IT     Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (AIM1, DNA methylation profiles in and   ***disease***
             ***susceptibility***  ; detection of variations in DNA methylation
            profile of genes in detg. risk of disease)
IT     Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (AIRE, DNA methylation profiles and disease susceptibility; detection
            of variations in   ***DNA***   methylation profile of genes in detg.
            risk of disease)
IT     Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (ALAD, DNA methylation profiles and disease susceptibility; detection
            of variations in   ***DNA***   methylation profile of genes in detg.
            risk of disease)
IT     Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (ALDH1, DNA methylation profiles in and disease susceptibility;
            detection of variations   ***in***   DNA methylation profile of genes
            in detg. risk of disease)
IT     Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (ALDH10, DNA methylation profiles in and   ***disease***
            susceptibility; detection of variations in DNA methylation profile of
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            genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ALDH2, DNA methylation profiles in and disease   ***susceptibility***
         ; detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ALDOA, DNA methylation profiles and disease susceptibility;
           ***detection***   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ALDOB, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ALDOC, DNA methylation profiles and disease susceptibility; detection
         of variations in DNA methylation profile   ***of***   genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ANGPT1, DNA methylation profiles in and disease   ***susceptibility***
         ; detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ANGPT2, DNA methylation profiles in and   ***disease***
         susceptibility; detection of variations in DNA methylation profile of
         genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ANX1, DNA methylation profiles in and   ***disease***
           ***susceptibility***  ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ANX4, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Transcription factors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (AP-2 (activator protein 2), DNA   ***methylation***   profiles in gene
         for and disease   ***susceptibility***  ; detection of variations in
         DNA methylation profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
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use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (APBB1, DNA methylation profiles and disease   ***susceptibility*** ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
    IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (APC, DNA methylation profiles in and   ***disease***   susceptibility;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
    IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (APLP, DNA methylation profiles in and   ***disease***
           susceptibility; detection of variations in DNA methylation profile of
           genes in detg. risk of disease)
    IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (APOA2, DNA methylation profiles and disease   ***susceptibility*** ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
    IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (APOAI, DNA methylation profiles and disease susceptibility;
            detection   of variations in DNA methylation profile of genes in
           detg. risk of disease)
    IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (APOB, DNA methylation profiles and disease susceptibility;
            detection   of variations in DNA methylation profile of genes in
           detg. risk of disease)
    IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (APOC1, DNA methylation profiles and disease susceptibility;
            detection   of variations in DNA methylation profile of genes in
           detg. risk of disease)
    IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (APOC2, DNA methylation profiles and disease   ***susceptibility*** ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
    IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (APOC3, DNA methylation profiles and disease susceptibility; detection
            of   variations in DNA methylation profile of genes in detg.
risk
           of disease)
    IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (APOD, DNA methylation profiles and disease   ***susceptibility*** ;

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         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (APOE, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (APOH, DNA methylation profiles and disease susceptibility;
          ***detection***   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (APP, DNA methylation profiles in and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (APT1, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (APT1LG1, DNA methylation profiles and disease  ***susceptibility***
         ; detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (AR, DNA methylation profiles in and disease susceptibility; detection
         of variations  ***in***   DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (AREG, DNA methylation profiles in and disease susceptibility;
         detection of variations  ***in***   DNA methylation profile of genes
         in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ARG1, DNA methylation profiles and disease susceptibility; detection
         of variations in  ***DNA***   methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ARNT, DNA methylation profiles and disease susceptibility;
          ***detection***   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT    Gene, animal
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        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ARSA, DNA methylation profiles and disease susceptibility; detection
           of variations in   ***DNA***   methylation profile of genes in detg.
           risk of disease)
   IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ARSB, DNA methylation profiles and disease susceptibility; detection
           of variations   ***in***   DNA methylation profile of genes in detg.
           risk of disease)
   IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ARSD, DNA methylation profiles and disease susceptibility; detection
           of variations in   ***DNA***   methylation profile of genes in detg.
           risk of disease)
   IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ARSE, DNA methylation profiles and disease   ***susceptibility***   ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ARSF, DNA methylation profiles and disease susceptibility; detection
           of variations in   ***DNA***   methylation profile of genes in detg.
           risk of disease)
   IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (AS, DNA methylation profiles and disease   ***susceptibility***   ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ASH2, DNA methylation profiles and disease   ***susceptibility***   ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ASL, DNA methylation profiles and disease susceptibility; detection of
           variations   ***in***   DNA methylation profile of genes in detg. risk
           of disease)
   IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ASPA, DNA methylation profiles and disease   ***susceptibility***   ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ASS, DNA methylation profiles and disease   ***susceptibility***   ;
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          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
          (ASTN, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (AT3, DNA methylation profiles in and   ***disease***
           ***susceptibility***   ; detection of variations in DNA methylation
          profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (ATDC, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (ATM, DNA methylation profiles and disease susceptibility; detection of
           ***variations***   in DNA methylation profile of genes in detg. risk
of
          disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (ATOH1, DNA methylation profiles and disease susceptibility; detection
          of variations in   ***DNA***   methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (ATP7B, DNA methylation profiles and disease susceptibility; detection
          of variations in DNA   ***methylation***   profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (ATRX, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (AVP, DNA methylation profiles and   ***disease***   susceptibility;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (AZF1, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
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risk of disease)
IT   Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (Apaf-1 (apoptotic protease activating factor-1), ***DNA***
         methylation profiles in gene for and disease ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Apolipoproteins
      Cyclins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (B, DNA methylation profiles in gene for and disease
          susceptibility ; detection of variations ***in***   DNA
         methylation profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (B-lym, DNA methylation profiles and   ***disease***
          susceptibility ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (B-raf, DNA methylation profiles and   ***disease***
          susceptibility ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (B2M, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (B3GALT, DNA methylation profiles and   ***disease***
          susceptibility ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (BAPX1, DNA methylation profiles and   ***disease***   susceptibility;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (BARD1, DNA methylation profiles and   ***disease***   susceptibility;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (BAX, DNA methylation profiles and   ***disease***   susceptibility;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)

IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BCAT1, DNA methylation profiles and   ***disease***   susceptibility;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BCAT2, DNA methylation profiles and disease   ***susceptibility***   ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BCL-10, DNA methylation profiles and disease   ***susceptibility***   ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BCL-4, DNA methylation profiles and disease   ***susceptibility***   ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BCL-5, DNA methylation profiles and   ***disease***
         susceptibility   ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BCL-6, DNA methylation profiles and   ***disease***
         susceptibility   ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BCL-7, DNA methylation profiles and   ***disease***   susceptibility;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BCL-8, DNA methylation profiles and   ***disease***   susceptibility;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BCL-9, DNA methylation profiles and disease susceptibility;
         detection   of variations in DNA methylation profile of genes in
        detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

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        (BCL2A1, DNA methylation profiles and disease susceptibility; detection
        of   ***variations***   in DNA methylation profile of genes in detg.
        risk of disease)
IT    Chimeric gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BCR-ABL, DNA methylation profiles and   ***disease***
          ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BDNF, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BDNFR, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BLM, DNA methylation profiles and   ***disease***   susceptibility;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BMP1, DNA methylation profiles and disease susceptibility; detection
        of variations in DNA methylation profile   ***of***   genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BMP2, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BMP3, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BMP4, DNA methylation profiles and disease susceptibility;
          ***detection***   of variations in DNA methylation profile of genes in
        detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BMP5, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
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IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BMP7, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BMP8, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Bone morphogenetic proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (BMP8, DNA methylation profiles in gene   ***for***   and disease
         ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Gene, animal
     Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BPGM, DNA methylation profiles and   ***disease***   susceptibility;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BRCA1, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BRCA2, DNA methylation profiles and   ***disease***   susceptibility;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BRCD1, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BRCD2, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (BTK, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
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use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (BWR1A, DNA methylation profiles and disease   ***susceptibility***   ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
     IT   Transcription factors
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)
             (BZLF1, DNA methylation profiles in gene   ***for***   and disease
               susceptibility   ; detection of variations in DNA methylation
             profile of genes in detg. risk of disease)
     IT   Proteins
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)
             (Bax, DNA methylation profiles in gene for   ***and***   disease
               susceptibility   ; detection of variations in DNA methylation
             profile of genes in detg. risk of disease)
     IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (Bcl-2, DNA methylation profiles and disease   ***susceptibility***   ;
             detection of variations in DNA methylation profile of   ***genes***
             in detg. risk of disease)
     IT   Bradykinin receptors
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)
             (B1, DNA methylation profiles in gene   ***for***   and disease
               susceptibility   ; detection of variations in DNA methylation
             profile of genes in detg. risk of disease)
     IT   Bradykinin receptors
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)
             (B2, DNA methylation profiles in gene for and disease
               susceptibility   ; detection of variations in DNA methylation
               profile   of genes in detg. risk of disease)
     IT   Cyclins
          High-mobility group proteins
          Troponins
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)
             (C, DNA methylation profiles in gene for   ***and***   disease
               susceptibility   ; detection of variations in   ***DNA***
             methylation profile of genes in detg. risk of disease)
     IT   Apolipoproteins
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)
             (C-I, DNA methylation profiles in gene for and disease
               susceptibility   ; detection of variations in DNA methylation
               profile   of genes in detg. risk of disease)
     IT   Apolipoproteins
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)
             (C-II, DNA methylation profiles in gene   ***for***   and disease
               susceptibility   ; detection of variations in DNA methylation
             profile of genes in detg. risk of disease)
     IT   Apolipoproteins
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)

(C-III, DNA methylation profiles in gene for and disease
              susceptibility ; detection of variations in DNA methylation
              profile   of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (C1R, DNA methylation profiles and disease ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (C1S, DNA methylation profiles and disease ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (C2, DNA methylation profiles and disease ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (C3, DNA methylation profiles and disease ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (C4A, DNA methylation profiles and disease ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (C4B, DNA methylation profiles and disease ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (C5, DNA methylation profiles and disease ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (C6, DNA methylation profiles and disease ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (C7, DNA methylation profiles and disease ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)

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IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (C8B, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (C9, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CALB2, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CALB3, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CALBI, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CALM1, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CANX, DNA methylation profiles and disease susceptibility; detection
         ***of***   variations in DNA methylation profile of genes in detg.
risk
        of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CASP1, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CASP2, DNA methylation profiles and disease susceptibility; detection
        of  ***variations***   in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
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         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (CASP3, DNA methylation profiles and disease  ***susceptibility***  ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (CASP4, DNA methylation profiles and disease susceptibility; detection
            of variations in DNA methylation profile  ***of***   genes in detg.
            risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (CASP5, DNA methylation profiles and disease  ***susceptibility***  ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (CASP7, DNA methylation profiles and disease  ***susceptibility***  ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (CASP8, DNA methylation profiles and disease  ***susceptibility***  ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT    Gene, animal
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study)
            (CASP9, DNA methylation profiles and disease susceptibility;
             ***detection***   of variations in DNA methylation profile of genes in
            detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (CAT, DNA methylation profiles and disease  ***susceptibility***  ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (CAV3, DNA methylation profiles and disease  ***susceptibility***  ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT    Transcription factors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
         (Biological study); USES (Uses)
            (CBF (core-binding factor), DNA methylation profiles  ***in***   gene
            for and disease  ***susceptibility***  ; detection of variations in
            DNA methylation profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (CBFA1, DNA methylation profiles and disease susceptibility;
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           ***detection***    of variations in DNA methylation profile of genes in
        detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CBFA2, DNA methylation profiles and disease susceptibility; detection
        of variations in DNA methylation profile of   ***genes***   in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CBFB, DNA methylation profiles and disease susceptibility; detection
        of variations in DNA methylation profile of   ***genes***   in detg.
        risk of disease)
IT    Transcription factors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
        (CBP (CREB-binding protein), DNA methylation profiles in gene for and
        disease   ***susceptibility***   ; detection of variations in DNA
        methylation profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CBS, DNA methylation profiles and disease   ***susceptibility***   ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CCNA, DNA methylation profiles and disease   ***susceptibility***   ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CCNB, DNA methylation profiles and disease susceptibility; detection
        of   ***variations***   in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CCNC, DNA methylation profiles and disease   ***susceptibility***   ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CCNE, DNA methylation profiles and disease   ***susceptibility***   ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CCR2, DNA methylation profiles and disease   ***susceptibility***   ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Chemokine receptors
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RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
           (CCR2, DNA methylation profiles in gene   ***for***   and disease
            susceptibility ; detection of variations in DNA methylation
           profile of genes in detg. risk of disease)
IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (CCR3, DNA methylation profiles and disease   ***susceptibility*** ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT   Chemokine receptors
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
           (CCR3, DNA methylation profiles in gene for   ***and***   disease
            susceptibility ; detection of variations in DNA methylation
           profile of genes in detg. risk of disease)
IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (CCR5, DNA methylation profiles and disease susceptibility;
            detection   of variations in DNA methylation profile of genes in
           detg. risk of disease)
IT   Chemokine receptors
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
           (CCR5, DNA methylation profiles in gene for   ***and***   disease
           susceptibility; detection of variations in DNA methylation profile of
           genes in detg. risk of disease)
IT   CD antigens
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
           (CD 56, DNA methylation profiles in   ***gene***   for and disease
            susceptibility ; detection of variations in DNA methylation
           profile of genes in detg. risk of disease)
IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (CD1, DNA methylation profiles and disease susceptibility; detection of
            variations   in DNA methylation profile of genes in detg. risk
of
           disease)
IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (CD10, DNA methylation profiles and disease   ***susceptibility*** ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT   CD antigens
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
           (CD146, DNA methylation profiles in gene   ***for***   and disease
            susceptibility ; detection of variations in DNA methylation
           profile of genes in detg. risk of disease)
IT   CD antigens
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)

(CD149, DNA methylation profiles in gene for and disease
           susceptibility ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   CD antigens
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
        (CD18, DNA methylation profiles in gene   ***for***   and disease
        susceptibility; detection of variations in DNA methylation profile of
        genes in detg. risk of disease)
IT   CD antigens
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
        (CD31, DNA methylation profiles in gene   ***for***   and disease
           susceptibility ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CD4, DNA methylation profiles and disease   ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   CD antigens
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
        (CD42a, DNA methylation profiles in gene   ***for***   and disease
           susceptibility ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CDH1, DNA methylation profiles and disease   ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CDH2, DNA methylation profiles and disease   ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CDH3, DNA methylation profiles and disease   ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CDK1, DNA methylation profiles and disease   ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (CDK10, DNA methylation profiles and disease susceptibility; detection
        of   ***variations***   in DNA methylation profile of genes in detg.
        risk of disease)

IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CDK3, DNA methylation profiles and disease susceptibility; detection
         of ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CDK4, DNA methylation profiles and disease susceptibility; detection
         of ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CDK5, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CDK6, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (CDK7, DNA methylation profiles in gene for and disease
          susceptibility ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CDK8, DNA methylation profiles in gene   ***for***   and disease
         susceptibility; detection of variations in DNA methylation profile of
         genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CDK9, DNA methylation profiles in gene   ***for***   and disease
          susceptibility ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CDKN1A, DNA methylation profiles in and   ***disease***
          susceptibility ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CDKN1B, DNA methylation profiles in and   ***disease***
          susceptibility ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

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            (CDKN1C, DNA methylation profiles in and disease   ***susceptibility***
            ; detection    ***of***    variations in DNA methylation profile of genes
            in detg. risk of disease)
   IT    Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (CDKN23, DNA methylation profiles in and disease   ***susceptibility***
            ; detection of   ***variations***   in DNA methylation profile of genes
            in detg. risk of disease)
   IT    Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (CDKN2A, DNA methylation profiles in and    ***disease***
             ***susceptibility***   ; detection of variations in DNA methylation
            profile of genes in detg. risk of disease)
   IT    Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (CHAT, DNA methylation profiles and disease   ***susceptibility***   ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
   IT    Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (CHGA, DNA methylation profiles and disease   ***susceptibility***   ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
   IT    Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (CHH, DNA methylation profiles and disease   ***susceptibility***   ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
   IT    Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (CHM, DNA methylation profiles and disease   ***susceptibility***   ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
   IT    Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (CHRH1, DNA methylation profiles and disease   ***susceptibility***   ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
   IT    Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (CHRNG, DNA methylation profiles and disease   ***susceptibility***   ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
   IT    Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (CHYI, DNA methylation profiles and disease   ***susceptibility***   ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
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IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CIQA, DNA methylation profiles and disease ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CLCN1, DNA methylation profiles and disease susceptibility; detection
         of ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CLN2, DNA methylation profiles and disease susceptibility; detection
         of ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CLN3, DNA methylation profiles and disease susceptibility; detection
         of ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CLN4, DNA methylation profiles and disease susceptibility; detection
         of variations ***in***   DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CLN6, DNA methylation profiles and disease susceptibility;
          detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CLQB, DNA methylation profiles and disease ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CLQG, DNA methylation profiles and disease susceptibility;
          detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CLU, DNA methylation profiles and disease susceptibility;
          detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

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          (CNGA3, DNA methylation profiles and disease susceptibility;
             ***detection***   of variations in DNA methylation profile of genes in
          detg. risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CNGAL, DNA methylation profiles and disease susceptibility;
             ***detection***   of variations in DNA methylation profile of genes in
          detg. risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CNR1, DNA methylation profiles and disease susceptibility; detection
          of   ***variations***   in DNA methylation profile of genes in detg.
          risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CNTF, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CNTFR, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CNTN1, DNA methylation profiles and disease susceptibility; detection
          of   ***variations***   in DNA methylation profile of genes in detg.
          risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (COCH, DNA methylation profiles and disease susceptibility; detection
          of   ***variations***   in DNA methylation profile of genes in detg.
          risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (COL10A1, DNA methylation profiles and disease susceptibility;
          detection   ***of***   variations in DNA methylation profile of genes
          in detg. risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (COL11A1, DNA methylation profiles and disease susceptibility;
          detection of   ***variations***   in DNA methylation profile of genes
          in detg. risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (COL11A2, DNA methylation profiles and disease susceptibility;
             ***detection***   of variations in DNA methylation profile of genes in
          detg. risk of disease)
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IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (COL14A1, DNA methylation profiles and disease  ***susceptibility***
        ; detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (COL17A1, DNA methylation profiles and disease susceptibility;
         ***detection***   of variations in DNA methylation profile of genes in
        detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (COL1A2, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (COL2A1, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (COL3A1, DNA methylation profiles and disease susceptibility; detection
        of  ***variations***   in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (COL4A1, DNA methylation profiles and disease susceptibility; detection
        of  ***variations***   in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (COL4A3, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (COL4A4, DNA methylation profiles and disease susceptibility; detection
        of variations   ***in***   DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
     RL: ANT (Analyte); BSU (Biological study, unclassified)
; ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (COL4A5, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
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        Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (COL4A6, DNA methylation profiles and disease   ***susceptibility***   ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT      Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (COL5A1, DNA methylation profiles and disease   ***susceptibility***   ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT      Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (COL5A2, DNA methylation profiles and disease   ***susceptibility***   ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT      Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (COL6A2, DNA methylation profiles and disease   ***susceptibility***   ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT      Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (COL6A3, DNA methylation profiles and disease   ***susceptibility***   ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT      Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (COL7A1, DNA methylation profiles and disease susceptibility;
             ***detection***   of variations in DNA methylation profile of genes in
           detg. risk of disease)
IT      Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (COL9A2, DNA methylation profiles and disease susceptibility;
             ***detection***   of variations in DNA methylation profile of genes in
           detg. risk of disease)
IT      Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (COL9A3, DNA methylation profiles and disease susceptibility;
             ***detection***   of variations in DNA methylation profile of genes in
           detg. risk of disease)
IT      Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (COLQ, DNA methylation profiles and disease susceptibility;
             ***detection***   of variations in DNA methylation profile of genes in
           detg. risk of disease)
IT      Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
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(COLR, DNA methylation profiles and disease susceptibility; detection
         of ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CP, DNA methylation profiles and disease susceptibility; detection
          of   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CRAT, DNA methylation profiles and disease ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CRH, DNA methylation profiles and disease susceptibility;
          detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CRX, DNA methylation profiles and disease ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CRY2, DNA methylation profiles and disease ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CSBP1, DNA methylation profiles and disease ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (CSBP1, DNA methylation profiles in gene for and disease
         susceptibility; detection of variations   ***in***   DNA methylation
         profile of genes in detg. risk of disease)
IT   Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (CSBP2, DNA methylation profiles in gene for and disease
          susceptibility ; detection of   ***variations***   in DNA
         methylation profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (CSE, DNA methylation profiles in gene for and   ***disease***
          susceptibility ; detection of variations in DNA methylation

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             profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CSH1, DNA methylation  ***profiles***  and disease susceptibility;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CST3, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CSTB, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CSX, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations  ***in***   DNA methylation profile of genes
         in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CTH, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations  ***in***   DNA methylation profile of genes
         in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CTNNB1, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA  ***methylation***   profile of genes
         in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CTNS, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CTSG, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CTSK, DNA methylation profiles and disease susceptibility; detection
         of variations in  ***DNA***   methylation profile of genes in detg.
         risk of disease)
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IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CUBN, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of  ***variations***   in DNA methylation profile of genes
         in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CXCR1, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Chemokine receptors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (CXCR1, DNA methylation profiles in gene for and disease
          ***susceptibility***  ;  ***detection***   of variations in DNA
         methylation profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CXCR2, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations  ***in***   DNA methylation profile of genes
         in detg. risk of disease)
IT    Chemokine receptors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (CXCR2, DNA methylation profiles in gene for and disease
          ***susceptibility***  ;  ***detection***   of variations in DNA
         methylation profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CXCR4, DNA methylation profiles and disease  ***susceptibility***  ;
          ***detection***   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT    Chemokine receptors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (CXCR4, DNA methylation profiles in gene for  ***and***   disease
          ***susceptibility***  ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CYP11A1,  ***DNA***   methylation profiles and disease
          ***susceptibility***  ; detection of variations in  ***DNA***
         methylation profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (  ***CYP11B1***  , DNA methylation profiles and disease
          ***susceptibility***  ; detection of variations  ***in***   DNA
         methylation profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
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          (CYP11B2, DNA methylation profiles and disease   ***susceptibility***
          ; detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CYP17, DNA methylation profiles and disease   ***susceptibility***   ;
           ***detection***   of variations in DNA methylation profile of genes in
          detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CYP19, DNA methylation profiles and disease susceptibility; detection
           ***of***   variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CYP1A1, DNA methylation profiles and disease   ***susceptibility***   ;
           ***detection***   of variations in DNA methylation profile of genes in
          detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CYP1A2, DNA methylation profiles and disease susceptibility; detection
           ***of***   variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CYP1B1, DNA methylation profiles and disease susceptibility;
           ***detection***   of variations in DNA methylation profile of genes in
          detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CYP21, DNA methylation profiles and disease susceptibility;
           ***detection***   of variations in DNA methylation profile of genes in
          detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CYP24, DNA methylation profiles and disease susceptibility;
           ***detection***   of variations in DNA methylation profile of genes in
          detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CYP27, DNA methylation profiles and disease susceptibility;
           ***detection***   of variations in DNA methylation profile of genes in
          detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CYP2A1, DNA methylation profiles and disease susceptibility;
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detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CYP2A13, DNA methylation profiles and disease susceptibility;
            detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CYP2A3, DNA methylation profiles and disease susceptibility;
            detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CYP2A6V2, DNA methylation profiles and disease susceptibility;
            detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CYP2A7, DNA methylation profiles and disease susceptibility;
            detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CYP2B6, DNA methylation profiles and disease susceptibility;
            detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CYP2C18, DNA methylation profiles and disease susceptibility;
            detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CYP2C19, DNA methylation profiles and disease susceptibility;
         detection of variations   ***in***   DNA methylation profile of genes
         in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CYP2C8, DNA methylation profiles and disease susceptibility; detection
         of variations in   ***DNA***   methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (CYP2C9, DNA methylation profiles and disease susceptibility; detection
         of variations   ***in***   DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal

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          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (CYP2D6, DNA methylation profiles and disease susceptibility; detection
             of  ***variations***   in DNA methylation profile of genes in detg.
             risk of disease)
IT    Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (CYP2E1, DNA methylation profiles and disease  ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
IT    Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (CYP2F1, DNA methylation  ***profiles***   and disease susceptibility;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
IT    Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (CYP2J2, DNA methylation profiles and disease susceptibility; detection
             of variations  ***in***   DNA methylation profile of genes in detg.
             risk of disease)
IT    Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (CYP3A3, DNA methylation profiles and disease  ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
IT    Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (CYP3A4, DNA methylation profiles and disease susceptibility; detection
              ***of***   variations in DNA methylation profile of genes in detg.
risk
             of disease)
IT    Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (CYP3A5, DNA methylation profiles and disease susceptibility; detection
              ***of***   variations in DNA methylation profile of genes in detg.
risk
             of disease)
IT    Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (CYP3A7, DNA methylation profiles and disease susceptibility; detection
              ***of***   variations in DNA methylation profile of genes in detg.
risk
             of disease)
IT    Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (CYP4A11, DNA methylation profiles and disease susceptibility;
             detection  ***of***   variations in DNA methylation profile of genes
             in detg. risk of disease)
IT    Gene, animal
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       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CYP4B1, DNA methylation profiles and disease susceptibility; detection
          of variations   ***in***   DNA methylation profile of genes in detg.
          risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CYP4F3, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CYP51, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CYP5A1, DNA methylation profiles and disease susceptibility; detection
          of variations in   ***DNA***   methylation profile of genes in detg.
          risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CYP7A, DNA methylation profiles and disease   ***susceptibility***   ;
          detection   ***of***   variations in DNA methylation profile of genes
          in detg. risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (CYP8, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT     Apolipoproteins
       Cyclins
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (D, DNA methylation profiles in gene for and disease
            ***susceptibility***   ; detection of variations in DNA methylation
          profile of genes in detg. risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (DAD1, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT     Steroid receptors
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (DAX-1, DNA   ***methylation***   profiles in gene for and disease
            ***susceptibility***   ; detection of variations in DNA methylation
          profile of genes in detg. risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
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        (DAX1, DNA methylation profiles   ***and***   disease
          ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (DBH, DNA methylation profiles   ***and***   disease
          ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (DBH, DNA methylation   ***profiles***   in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Gene, animal
     Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
        (DBT, DNA methylation profiles   ***and***   disease
          ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (DCC, DNA   ***methylation***   profiles and disease
          ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (DDHI, DNA   ***methylation***   profiles and disease
          ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (DECR, DNA   ***methylation***   profiles and disease susceptibility;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (DES, DNA methylation profiles and   ***disease***
          ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (DHAPAT, DNA methylation   ***profiles***   and disease susceptibility;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (DHCR7, DNA methylation   ***profiles***   and disease susceptibility;
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        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (DIA1, DNA   ***methylation***   profiles and disease susceptibility;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (DIAPH1, DNA methylation profiles   ***and***   disease susceptibility;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (DIAPH2, DNA methylation   ***profiles***   and disease
         ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (DKC1, DNA methylation   ***profiles***   in and disease
         ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT     ***Gene***  , animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
        (DM, DNA methylation profiles in gene for and disease susceptibility;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
        (DM2, DNA methylation profiles in gene   ***for***   and disease
        susceptibility; detection of variations in DNA methylation profile of
        genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (  ***DMBT1***   , DNA methylation profiles and disease
         ***susceptibility***  ; detection of   ***variations***   in DNA
        methylation profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
        (DMD, DNA methylation profiles in gene for and disease
         ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (DMPK, DNA methylation profiles and   ***disease***
         ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT    Enzymes, biological studies
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RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(DNA helicase, DNA methylation profiles in gene   ***for***   and
disease   ***susceptibility*** ; detection of variations in DNA
methylation profile of genes in detg. risk of disease)
IT   Myelin basic protein
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(DNA methylation profiles in gene for and   ***disease***
   susceptibility ; detection of variations in DNA methylation
profile of genes in detg. risk of disease)
IT   ACTH receptors
Activin receptors
Amyloid precursor proteins
Androgen receptors
Bone morphogenetic protein 1
Bone morphogenetic protein 2
Bone morphogenetic protein 3
Bone morphogenetic protein 4
Bone morphogenetic protein 5
Bone morphogenetic protein 6
Bone morphogenetic protein 7
CD1 (antigen)
CD4 (antigen)
Calcitonin gene-related peptide receptors
Calcitonin receptors
Calmodulins
Calnexin
Calretinin
Cannabinoid receptors
Carcinoembryonic antigen
Chloride channel
Ciliary neurotrophic factor
Clathrin
Clusterin
Corticotropin releasing factor receptors
Desmins
Dynamin
Dystrophin
Elastins
   Endoglins
Endothelin ETA receptors
Endothelin ETB receptors
Epidermal growth factor receptors
Fas antigen
Fas ligand
Fc.gamma.RI receptors
Fc.gamma.RII receptors
Fc.gamma.RIII receptors
Fibrillins
Fibrinogens
Fibronectins
Galanin receptors
Glycine receptors
Gonadotropin-releasing hormone receptor
Haptoglobin
Hemoglobins

High-density lipoproteins
Inositol 1,4,5-trisphosphate receptors
Intermediate-density lipoproteins
Iron-sulfur proteins
Laminin receptors
Leptin receptors
Leukemia inhibitory factor
Leukemia inhibitory factor receptors
Lymphotoxin
Macrophage inflammatory protein 2
Melatonin receptors
Mineralocorticoid receptors
Monocyte chemoattractant protein-1
Myelin P0 protein
Myoglobins
Myosins
Nebulin (protein)
Nerve growth factor receptors
Neuregulin 1
Neurofibromin
Neurokinins
Neurotensin receptors
Nicotinic receptors
Osteonectin
Osteopontin
Parathyroid hormone receptors
Parvalbumins
Platelet-activating factor receptors
Platelet-derived growth factor receptors
Platelet-derived growth factors
Potassium channel
Presenilins
Prion proteins
Proliferating cell nuclear antigen
Radixin
Ras proteins
Ryanodine receptors
Selectins
Stem cell factor
Synaptophysin
TCR .alpha..beta. (receptor)
Talin
Tau factor
Tenascins
Thrombin receptors
Thrombomodulin
Thrombospondins
Thyrotropin-releasing hormone receptors
Tumor necrosis factor receptors
Tumor necrosis factors
Urokinase-type plasminogen activator receptors
VIP receptors
Vasopressin receptors
Very-low-density lipoproteins
Vimentins
Vinculin
Vitamin D receptors

c-Kit (protein)
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
            (DNA methylation profiles in   ***gene***   ***for***   ***and***
            disease   ***susceptibility***   ;   ***detection***
            of   ***variations***   ***in***   ***DNA***
            methylation   ***profile***   of genes in detg. risk of
        disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (DNM1, DNA methylation profiles and disease   ***susceptibility***   ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
         (DNM1, DNA methylation profiles in gene for and disease
          susceptibility   ; detection   ***of***   variations in DNA
     methylation profile of genes in detg. risk of disease)
IT   Cytokine receptors
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
         (DR4 (death receptor 4), DNA methylation   ***profiles***   in gene for
         and disease   ***susceptibility***   ; detection of variations in DNA
         methylation profile of genes in detg. risk of disease)
IT   Cytokine receptors
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
         (DR5 (death receptor 5), DNA methylation profiles   ***in***   gene for
         and disease   ***susceptibility***   ; detection of variations in DNA
         methylation profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (DRPLA, DNA methylation profiles and disease   ***susceptibility***   ;
         detection of variations in DNA   ***methylation***   profile of genes
         in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (DYSF, DNA methylation profiles in and   ***disease***
          susceptibility   ; detection of variations in DNA methylation
     profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
         (DYT1, DNA methylation profiles in gene for and disease
          susceptibility   ; detection of   ***variations***   in DNA
     methylation profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
         (DYT3, DNA methylation profiles in gene for and disease
          susceptibility   ; detection of   ***variations***   in DNA
     methylation profile of genes in detg. risk of disease)
IT   Gene, animal

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       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (DYT6, DNA methylation profiles in gene for and disease
            ***susceptibility***  ; detection of   ***variations***   in DNA
          methylation profile of genes in detg. risk of disease)
IT     Gene, animal
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (DYT7, DNA methylation profiles in gene for and disease
            ***susceptibility***  ;   ***detection***   of variations in DNA
          methylation profile of genes in detg. risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (Ddc, DNA methylation profiles and disease   ***susceptibility***  ;
          detection of variations   ***in***   DNA methylation profile of genes
          in detg. risk of disease)
IT     Blood-group substances
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (Duffy, DNA methylation profiles in gene for and disease
            ***susceptibility***  ;   ***detection***   of variations in DNA
          methylation profile of genes in detg. risk of disease)
IT     Calbindins
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (D28k, DNA methylation profiles in gene for and disease
            ***susceptibility***   ; detection of   ***variations***   in DNA
          methylation profile of genes in detg. risk of disease)
IT     Calbindins
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (D9k, DNA methylation profiles in gene for and disease
            ***susceptibility***   ; detection of   ***variations***   in DNA
          methylation profile of genes in detg. risk of disease)
IT     Apolipoproteins
       Cyclins
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (E, DNA methylation profiles in gene for and disease
            ***susceptibility***   ; detection of   ***variations***   in DNA
          methylation profile of genes in detg. risk of disease)
IT     Selectins
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (E-, DNA methylation profiles in gene for and disease
            ***susceptibility***   ; detection of   ***variations***   in DNA
          methylation profile of genes in detg. risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (EBAF, DNA methylation profiles and disease   ***susceptibility***  ;
          detection of variations in   ***DNA***   methylation profile of genes
          in detg. risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
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(ECE, DNA methylation profiles in and disease   ***susceptibility***   ;
         detection of variations   ***in***   DNA methylation profile of genes
         in detg. risk of disease)
IT   Gene, animal
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
         (ED1, DNA methylation profiles in gene for and disease
          susceptibility   ; detection of   ***variations***   in DNA
       methylation profile of genes in detg. risk of disease)
IT   Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (EDN1, DNA methylation profiles in and disease   ***susceptibility***
         ;   ***detection***   of variations in DNA methylation profile of genes
         in detg. risk of disease)
IT   Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (EDN2, DNA methylation profiles in and disease   ***susceptibility***
         ;   ***detection***   of variations in DNA methylation profile of genes
         in detg. risk of disease)
IT   Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (EDN3, DNA methylation profiles in and disease   ***susceptibility***
         ; detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (EDNRA, DNA methylation profiles in and disease   ***susceptibility***
         ; detection of   ***variations***   in DNA methylation profile of genes
         in detg. risk of disease)
IT   Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (EDNRB, DNA methylation profiles in and disease   ***susceptibility***
         ; detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (EFMR, DNA methylation profiles and disease   ***susceptibility***   ;
         detection of variations in   ***DNA***   methylation profile of genes
         in detg. risk of disease)
IT   Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (EGF, DNA methylation profiles in and disease   ***susceptibility***   ;
         detection of variations   ***in***   DNA methylation profile of genes
         in detg. risk of disease)
IT   Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (EIF4E, DNA methylation profiles in and disease   ***susceptibility***
         ; detection of variations   ***in***   DNA methylation profile of genes
         in detg. risk of disease)

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IT    Transcription factors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (EKLF (erythroid Kruppel-like factor), DNA methylation profiles in gene
          ***for***  and disease  ***susceptibility***  ; detection of
         variations in DNA methylation profile of genes in detg. risk of
         disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (EKLF, DNA methylation profiles and disease  ***susceptibility***  ;
         detection  ***of***  variations in DNA methylation profile of genes
         in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ELK1, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations  ***in***  DNA methylation profile of genes
         in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ELK2, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations  ***in***  DNA methylation profile of genes
         in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ELN, DNA methylation profiles and disease  ***susceptibility***  ;
         detection  ***of***  variations in DNA methylation profile of genes
         in detg. risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (EMD, DNA methylation profiles in gene for and disease
          ***susceptibility***  ;   ***detection***   of variations in DNA
         methylation profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (EMX2, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ENG, DNA methylation profiles in and disease  ***susceptibility***  ;
         detection  ***of***  variations in DNA methylation profile of genes
         in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (EPB41, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in  ***DNA***  methylation profile of genes
         in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
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use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
   (EPB42, DNA methylation profiles and disease ***susceptibility*** ;
   detection of variations in DNA methylation profile of genes in detg.
   risk of disease)
IT   Gene, animal
   RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
   use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
   (EPB72, DNA methylation profiles and disease ***susceptibility*** ;
   detection of variations in DNA methylation profile of genes in detg.
   risk of disease)
IT   Gene, animal
   RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
   use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
   (EPHA, DNA methylation profiles in and disease ***susceptibility***
   ; detection of variations in DNA methylation profile of genes in detg.
   risk of disease)
IT   Gene, animal
   RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
   use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
   (EPHB, DNA methylation profiles in and disease ***susceptibility***
   ; detection of variations in DNA methylation profile of genes in detg.
   risk of disease)
IT   Gene, animal
   RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
   (Biological study); USES (Uses)
   (EPM2A, DNA methylation profiles in gene for and disease
    susceptibility ; detection of variations in DNA methylation
   profile of genes in detg. risk of disease)
IT   Gene, animal
   RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
   use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
   (ERB, DNA methylation profiles and disease ***susceptibility*** ;
   detection of variations in DNA methylation profile of genes in detg.
   risk of disease)
IT   Gene, animal
   RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
   use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
   (ERBAL2, methylation profiles and disease ***susceptibility*** ;
   detection of variations in DNA methylation profile of genes in detg.
   risk of disease)
IT   Gene, animal
   RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
   use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
   (ERBB2, DNA methylation profiles and disease ***susceptibility*** ;
   detection ***of***   variations in DNA methylation profile of genes
   in detg. risk of disease)
IT   Gene, animal
   RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic
   use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
   (ERCC5, DNA methylation profiles in and disease ***susceptibility***
   ; detection of ***variations***   in DNA methylation profile of genes
   in detg. risk of disease)
IT   Gene, animal
   RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
   use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
   (ERG, DNA methylation profiles and disease ***susceptibility*** ;
   detection of variations ***in***   DNA methylation profile of genes

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         in detg. risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (ETFA, DNA methylation profiles in gene for and   ***disease***
          ***susceptibility***  ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (ETFB, DNA methylation profiles in gene for and disease
          ***susceptibility***  ;   ***detection***   of variations in DNA
         methylation profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (ETFDH, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection   ***of***   variations in DNA
         methylation profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ETM1, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations   ***in***   DNA
         methylation profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ETM2, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection   ***of***   variations in DNA
         methylation profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ETS1, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of   ***variations***   in DNA methylation profile of genes
         in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
         (ETS2, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of   ***variations***   in DNA methylation profile of genes
         in detg. risk of disease
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (EWSR1, DNA methylation profiles in and disease   ***susceptibility***
         ; detection   ***of***   variations in DNA methylation profile of genes
         in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (EXT1, DNA methylation profiles in and disease   ***susceptibility***
         ; detection   ***of***   variations in DNA methylation profile of genes
         in detg. risk of disease)
IT    Gene, animal
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RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (EXT2, DNA methylation profiles in and disease   ***susceptibility***
             ; detection   ***of***   variations in DNA methylation profile of genes
             in detg. risk of disease)
    IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (En-1, DNA methylation profiles in and disease   ***susceptibility***
             ;   ***detection***   of variations in DNA methylation profile of genes
             in detg. risk of disease)
    IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (Evi-1, DNA methylation profiles and disease   ***susceptibility*** ;
             detection   ***of***   variations in DNA methylation profile of genes
             in detg. risk of disease)
    IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (F1, DNA methylation profiles and disease   ***susceptibility*** ;
             detection   ***of***   variations in DNA methylation profile of genes
             in detg. risk of disease)
    IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (F11, DNA methylation profiles and disease   ***susceptibility*** ;
             detection of variations   ***in***   DNA methylation profile of genes
             in detg. risk of disease)
    IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (F12, DNA methylation profiles and disease   ***susceptibility*** ;
             detection of variations in DNA methylation profile of genes in
               detg . risk of disease)
    IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (F13, DNA methylation profiles and disease   ***susceptibility*** ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
    IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (F2, DNA methylation profiles and disease   ***susceptibility*** ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
    IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (F2R, DNA methylation profiles and disease   ***susceptibility*** ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
    IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (F3, DNA methylation profiles and disease   ***susceptibility*** ;

detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (F5, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (FABP (fatty acid-binding protein), DNA methylation profiles in gene
          for and disease   ***susceptibility***   ; detection of variations in
          DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (FABP2, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (FANCA, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (FANCC, DNA methylation profiles in and disease   ***susceptibility***
          ; detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (FANCD, DNA methylation profiles in and disease   ***susceptibility***
          ; detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (FBN1, DNA methylation profiles in and disease   ***susceptibility***
          ; detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (FBN2, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (FCGR2A, DNA methylation profiles in and disease   ***susceptibility***
          ; detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal

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        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (FCGR3A, DNA methylation profiles in and disease   ***susceptibility***
           ; detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (FCGRLA, DNA methylation profiles in and disease   ***susceptibility***
           ; detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (FCMD, DNA methylation profiles and disease   ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (FECH, DNA methylation profiles in and disease   ***susceptibility***
           ; detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (FGA, DNA methylation profiles and disease   ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (FGB, DNA methylation profiles and disease   ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (FGD1, DNA methylation profiles and disease   ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (FGF1, DNA methylation profiles in and disease   ***susceptibility***
           ; detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (FGF3, DNA methylation profiles and disease   ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (FGFR1, DNA methylation profiles in and disease   ***susceptibility***
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            ; detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (FGFR2, DNA methylation profiles in and disease   ***susceptibility***
            ; detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (FGFR3, DNA methylation profiles in and disease   ***susceptibility***
            ; detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (FGG, DNA methylation profiles and disease   ***susceptibility***   ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (FGR, DNA methylation profiles and disease   ***susceptibility***   ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (FKHR, DNA methylation profiles in and disease   ***susceptibility***
            ; detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (FLII, DNA methylation profiles and disease   ***susceptibility***   ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (FN1, DNA methylation profiles in and disease   ***susceptibility***   ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (FRAXA, DNA methylation profiles and disease   ***susceptibility***   ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (FRAXE, DNA methylation profiles and disease   ***susceptibility***   ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT    Gene, animal
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          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (FRAXF, DNA methylation profiles and disease  ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
   IT    Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (FUCA1, DNA methylation profiles and disease  ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
   IT    Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (FUT2, DNA methylation profiles and disease  ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
   IT    Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (FUT22, DNA methylation profiles and disease  ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
   IT    Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (FVT1, DNA methylation profiles in and disease  ***susceptibility***
             ; detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
   IT    Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (FY, DNA methylation profiles and disease  ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
   IT    Proteins
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)
             (G/T mismatch binding, DNA methylation profiles in gene for and disease
              ***susceptibility***  ; detection of variations in DNA methylation
             profile of genes in detg. risk of disease)
   IT    Gene, animal
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)
             (GAA, DNA methylation profiles disease  ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
   IT    Gene, animal
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)
             (GAD1, DNA methylation profiles disease  ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
   IT    Gene, animal
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)
             (GAL, DNA methylation profiles disease  ***susceptibility***  ;
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detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (GALC, DNA methylation profiles disease ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (GALE, DNA methylation profiles in and disease ***susceptibility***
         ; detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (GALNRL, DNA methylation profiles disease ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (GALNS, DNA methylation profiles and disease ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (GAS, DNA methylation profiles and disease ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Transcription factors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (GATA-1, DNA methylation profiles in gene for and disease
          susceptibility ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (GAX, DNA methylation profiles and disease ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (GBEI, DNA methylation profiles and disease ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (GBX2, DNA methylation profiles disease ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal

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      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (GCDH, DNA methylation profiles disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (GDCA, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (GDF5, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (GDI (GDP dissocn. inhibitor), DNA methylation profiles in gene for and
         disease  ***susceptibility***  ; detection of variations in DNA
         methylation profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (GDNF, DNA methylation profiles disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Neurotrophic factor receptors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (GDNF, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (GFBI, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (GGTA1, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (GIF, DNA methylation profiles disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (GJB2, DNA methylation profiles disease  ***susceptibility***  ;
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         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (GJB3, DNA methylation profiles disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (GK, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (GK, DNA methylation profiles disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (GLA, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (GLCLC, DNA methylation profiles disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (GLDC, DNA methylation profiles disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (GLI1, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (GLI2, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (GLI3, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
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        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
           (GLRA2, DNA methylation profiles disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (GLS, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT    Gene, animal
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
           (GLUD1, DNA methylation profiles disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease
IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (GLYS1, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (GLYS2, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT    Gene, animal
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
           (GLYT, DNA methylation profiles disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT    Glycoproteins
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
           (GM2 ganglioside activator protein GM2A, DNA methylation profiles in
           gene for and disease  ***susceptibility***  ; detection of variations
           in DNA methylation profile of genes in detg. risk of disease)
IT    Gene, animal
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
           (GM2A, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (GNPTA, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
IT    Gene, animal
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
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          (GNRHR, DNA methylation profiles and disease   ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (GNS, DNA methylation profiles and disease   ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Glycoproteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (GP IX, DNA methylation profiles in gene for and disease
           ***susceptibility***  ; detection of variations in DNA methylation
          profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (GP1BB, DNA methylation profiles and disease   ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (GP1BG, DNA methylation profiles and disease   ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (GP5, DNA methylation profiles and disease   ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (GP9, DNA methylation profiles and disease   ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (GPC3, DNA methylation profiles and disease   ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (GPI, DNA methylation profiles and disease   ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
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(GPIBA, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
    IT   Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
              (GPIBB, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
    IT   Glycoproteins
         RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
         (Biological study); USES (Uses)
              (GPIb, platelet, DNA methylation profiles in gene for and disease
               susceptibility ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
    IT   Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
              (GPLBG, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
    IT   Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
              (GRB2, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
    IT   Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
              (GRP, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
    IT   Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
              (GSC, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
    IT   Gene, animal
         RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
         (Biological study); USES (Uses)
              (GSH, DNA methylation profiles disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
    IT   Gene, animal
         RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
         (Biological study); USES (Uses)
              (GSM1, DNA methylation profiles disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
    IT   Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
              (GT1, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)

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IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (GUCA1A, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    G proteins (guanine nucleotide-binding proteins)
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (Gq, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT    Apolipoproteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (H, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (HADHA, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (HADHB, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (HAGH, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (HBA1, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (HBB, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (HBD, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
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           use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
              (HBG1, DNA methylation profiles and disease   ***susceptibility***  ;
              detection of variations in DNA methylation profile of genes in detg.
              risk of disease)
     IT    Gene, animal
           RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
           use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
              (HBG2, DNA methylation profiles and disease   ***susceptibility***  ;
              detection of variations in DNA methylation profile of genes in detg.
              risk of disease)
     IT    Gene, animal
           RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
           use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
              (HBGG, DNA methylation profiles and disease   ***susceptibility***  ;
              detection of variations in DNA methylation profile of genes in detg.
              risk of disease)
     IT    Gene, animal
           RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
           use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
              (HCF2, DNA methylation profiles and disease   ***susceptibility***  ;
              detection of variations in DNA methylation profile of genes in detg.
              risk of disease)
     IT    Gene, animal
           RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
           use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
              (HCNP, DNA methylation profiles and disease   ***susceptibility***  ;
              detection of variations in DNA methylation profile of genes in detg.
              risk of disease)
     IT    Gene, animal
           RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
           use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
              (HD, DNA methylation profiles and disease   ***susceptibility***  ;
              detection of variations in DNA methylation profile of genes in detg.
              risk of disease)
     IT    Gene, animal
           RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
           use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
              (HDLDT1, DNA methylation profiles and disease   ***susceptibility***  ;
              detection of variations in DNA methylation profile of genes in detg.
              risk of disease)
     IT    Gene, animal
           RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
           use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
              (HEXA, DNA methylation profiles and disease   ***susceptibility***  ;
              detection of variations in DNA methylation profile of genes in detg.
              risk of disease)
     IT    Gene, animal
           RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
           use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
              (HEXB, DNA methylation profiles and disease   ***susceptibility***  ;
              detection of variations in DNA methylation profile of genes in detg.
              risk of disease)
     IT    Gene, animal
           RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
           use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
              (HFE, DNA methylation profiles and disease   ***susceptibility***  ;
              detection of variations in DNA methylation profile of genes in detg.
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risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (HFI, DNA methylation profiles and disease   ***susceptibility***   ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (HGD, DNA methylation profiles and disease   ***susceptibility***   ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (HGL, DNA methylation profiles and disease   ***susceptibility***   ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Transcription factors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (HIF-1 (hypoxia-inducible factor 1), DNA methylation profiles in gene
         for and disease   ***susceptibility***   ; detection of variations in
         DNA methylation profile of genes in detg. risk of disease)
IT   Transcription factors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (HIF-2 (hypoxia-inducible factor 2), DNA methylation profiles in gene
         for and disease   ***susceptibility***   ; detection of variations in
         DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (HLADPBL, DNA methylation profiles and disease   ***susceptibility***
         ; detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (HLCS, DNA methylation profiles and disease   ***susceptibility***   ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (HLXB9, DNA methylation profiles and disease   ***susceptibility***   ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   High-mobility group proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (HMG-I(Y), DNA methylation profiles in gene for and disease
           susceptibility   ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic

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     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (HMGIC, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (HMGIY, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (HOX11, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (HOXA13, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (HPA2, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (HPAI, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (HPB, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (HPD, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (HPE1, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (HPE2, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
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risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (HPE3, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (HPE4, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (HPS, DNA methylation profiles in gene for and disease
          susceptibility ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (HR, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Glycoproteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (HRG (histidine-rich glycoprotein), DNA methylation profiles in gene
         for and disease   ***susceptibility*** ; detection of variations in
         DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (HRG, DNA methylation profiles in gene for and disease
          susceptibility ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (HSD11B2, DNA methylation profiles and disease   ***susceptibility***
         ; detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (HSD17B1, DNA methylation profiles and disease   ***susceptibility***
         ; detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (HSD17B3, DNA methylation profiles and disease   ***susceptibility***
         ; detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic

use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
   (HSD17B4, DNA methylation profiles and disease   ***susceptibility***
   ; detection of variations in DNA methylation profile of genes in detg.
   risk of disease)
IT   Gene, animal
   Gene, animal
   RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
   use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
      (HSD3B2, DNA methylation profiles and disease   ***susceptibility***   ;
      detection of variations in DNA methylation profile of genes in detg.
      risk of disease)
IT   Heat-shock proteins
   RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
   (Biological study); USES (Uses)
      (HSPA2, DNA methylation profiles in gene for and disease
        susceptibility   ; detection of variations in DNA methylation
      profile of genes in detg. risk of disease)
IT   Heat-shock proteins
   RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
   (Biological study); USES (Uses)
      (HSPAL, DNA methylation profiles in gene for and disease
        susceptibility   ; detection of variations in DNA methylation
      profile of genes in detg. risk of disease)
IT   Gene, animal
   RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
   use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
      (HSTF1, DNA methylation profiles and disease   ***susceptibility***   ;
      detection of variations in DNA methylation profile of genes in detg.
      risk of disease)
IT   Gene, animal
   RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
   use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
      (HTN3, DNA methylation profiles and disease   ***susceptibility***   ;
      detection of variations in DNA methylation profile of genes in detg.
      risk of disease)
IT   Gene, animal
   RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
   use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
      (HTS1, DNA methylation profiles and disease   ***susceptibility***   ;
      detection of variations in DNA methylation profile of genes in detg.
      risk of disease)
IT   Gene, animal
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
   RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
   use); ANST (Analytical study); BIOL (Biological study)
      (HVBS1, DNA methylation profiles and disease   ***susceptibility***   ;
      detection of variations in DNA methylation profile of genes in detg.
      risk of disease)
IT   Gene, animal
   RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
   use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
      (HVBS6, DNA methylation profiles and disease   ***susceptibility***   ;
      detection of variations in DNA methylation profile of genes in detg.
      risk of disease)
IT   Proteins
   Receptors
   RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)
             (Hel-N1, DNA methylation profiles in gene for and disease
               susceptibility ; detection of variations in DNA methylation
             profile of genes in detg. risk of disease)
     IT   Annexins
          Synaptotagmin
          Troponins
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)
             (I, DNA methylation profiles in gene for and disease
               susceptibility ; detection of variations in DNA methylation
             profile of genes in detg. risk of disease)
     IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (IC7A, DNA methylation profiles and disease ***susceptibility*** ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
     IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (IC7B, DNA methylation profiles and disease ***susceptibility*** ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
     IT   Cell adhesion molecules
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)
             (ICAM (intercellular adhesion mol.), DNA methylation profiles in gene
             for and disease ***susceptibility*** ; detection of variations in
             DNA methylation profile of genes in detg. risk of disease)
     IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (ICAM1, DNA methylation profiles and disease ***susceptibility*** ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
     IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (ICCA, DNA methylation profiles and disease ***susceptibility*** ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
     IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (IDS, DNA methylation profiles in gene for and disease
               susceptibility ; detection of variations in DNA methylation
             profile of genes in detg. risk of disease)
     IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (IDUA, DNA methylation profiles and disease ***susceptibility*** ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
     IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

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          (IF, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (IFNA1, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (IFNB1, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (IFNG, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (IFNGR1, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (IFNGR2, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (IGER, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (IGES, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (IGF1, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (IGF2, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
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IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (IGHG2, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (IGHM, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (IGJ, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (IGKC, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (IGKV, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (IHH, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT    Synaptotagmin
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
        (II, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (IKBL, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (ILP1, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
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        (INHA, DNA methylation profiles and disease   ***susceptibility***   ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (INHBA, DNA methylation profiles and disease   ***susceptibility***   ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (INHBB, DNA methylation profiles and disease   ***susceptibility***   ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (INHBC, DNA methylation profiles and disease   ***susceptibility***   ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (IRF-1, DNA methylation profiles and disease   ***susceptibility***   ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (IRF4, DNA methylation profiles and disease   ***susceptibility***   ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (IRS-1 (insulin receptor substrate 1), DNA methylation profiles in gene
        for and disease   ***susceptibility***   ; detection of variations in
        DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (IRS1, DNA methylation profiles in gene for and disease
         ***susceptibility***   ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Transcription factors
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (ISGF-2 (interferon-stimulated gene factor 2), DNA methylation profiles
        in gene for and disease   ***susceptibility***   ; detection of
        variations in DNA methylation profile of genes in detg. risk of
        disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (ITGA1, DNA methylation profiles and disease   ***susceptibility***   ;
        detection of variations in DNA methylation profile of genes in detg.
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          risk of disease)
IT    Gene, animal
      Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (ITGA2, DNA methylation profiles and disease  ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (ITGA5, DNA methylation profiles and disease  ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (ITGA6, DNA methylation profiles and disease  ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (ITGAm, DNA methylation profiles and disease  ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (ITGB1, DNA methylation profiles and disease  ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (ITGB2, DNA methylation profiles and disease  ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (ITGB3, DNA methylation profiles and disease  ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (ITGB4, DNA methylation profiles and disease  ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (ITGB5, DNA methylation profiles and disease  ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
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        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ITGB6, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ITGB7, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ITPR1, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (ITPR3, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (IVD, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT   Antibodies and Immunoglobulins
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
           (IgG2, DNA methylation profiles in gene for and disease
            ***susceptibility***  ; detection of variations in DNA methylation
           profile of genes in detg. risk of disease)
   IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (JAK1, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (JAK2, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (JAK3, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
   IT   Proteins
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
           (Jagged 1, DNA methylation profiles in gene for and disease
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           ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Blood-group substances
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (K (Kell), DNA methylation profiles in gene for and disease
           ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (KAI 1, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (KAL1, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (KEL, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (KHK, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Selectins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (L-, DNA methylation profiles in gene for and disease
           ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Ribosomal proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (L17, DNA methylation profiles in gene for and disease
           ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (L1CAM, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (LAMA3, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
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IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LAMB3, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LAMC2, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LAMM, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LAMP, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LAMR1, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LCAM, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LCAT, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LCO, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Low-density lipoproteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (LDL 1, DNA methylation profiles in gene for and disease
            susceptibility ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT   Low-density lipoproteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)

(LDL 2, DNA methylation profiles in gene for and disease
           susceptibility ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LECAM1, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use)
; BIOL (Biological study); USES (Uses)
         (LEF1, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LEP, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LEPR, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LHX1, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LHX2, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LHX3, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LHX4, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

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         (LIF, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LIFR, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LMANI, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LMNA, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LMO1, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LMO2, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LMO3, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LMO4, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (LPL, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LPP, DNA methylation profiles and disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
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IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LQT2, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LRP, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LST-1, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LTA4S, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LTB4S, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LTBP2, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LTC4S, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (LYL1, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Cell adhesion molecules
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (Leu-CAM (leukocytic cell adhesion mol.), DNA methylation profiles in
         gene for and disease   ***susceptibility*** ; detection of variations
         in DNA methylation profile of genes in detg. risk of disease)
IT   Laminins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)

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                (M, DNA methylation profiles in gene for and disease
                  ***susceptibility***  ; detection of variations in DNA methylation
                profile of genes in detg. risk of disease)
      IT    Gene, animal
            RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
            use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
                (MADH3, DNA methylation profiles and disease  ***susceptibility***  ;
                detection of variations in DNA methylation profile of genes in detg.
                risk of disease)
      IT    Gene, animal
            RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
            use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
                (MADH4, DNA methylation profiles and disease  ***susceptibility***  ;
                detection of variations in DNA methylation profile of genes in detg.
                risk of disease)
      IT    Transcription factors
            RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
            (Biological study); USES (Uses)
                (MADS box enhancer factor 2, DNA methylation profiles in gene for and
                disease  ***susceptibility***  ; detection of variations in DNA
                methylation profile of genes in detg. risk of disease)
      IT    Transcription factors
            RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
            (Biological study); USES (Uses)
                (MADS box, DNA methylation profiles in gene for and disease
                  ***susceptibility***  ; detection of variations in DNA methylation
                profile of genes in detg. risk of disease)
      IT    Gene, animal
            RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
            use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
                (MAF, DNA methylation profiles and disease  ***susceptibility***  ;
                detection of variations in DNA methylation profile of genes in detg.
                risk of disease)
      IT    Gene, animal
            RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
            use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
                (MANA, DNA methylation profiles and disease  ***susceptibility***  ;
                detection of variations in DNA methylation profile of genes in detg.
                risk of disease)
      IT    Gene, animal
            RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
            use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
                (MANB, DNA methylation profiles and disease  ***susceptibility***  ;
                detection of variations in DNA methylation profile of genes in detg.
                risk of disease)
      IT    Proteins
            RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
            (Biological study); USES (Uses)
                (MAP (microtubule-assocd. protein), DNA methylation profiles in gene
                for and disease  ***susceptibility***  ; detection of variations in
                DNA methylation profile of genes in detg. risk of disease)
      IT    Gene, animal
            RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
            use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
                (MAPK, DNA methylation profiles and disease  ***susceptibility***  ;
                detection of variations in DNA methylation profile of genes in detg.
                risk of disease)
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IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (MAPT, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (MAX protein interacting, DNA methylation profiles in gene for and
         disease   ***susceptibility*** ; detection of variations in DNA
         methylation profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (MBL2, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (MC2R, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (MC4R, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Cell adhesion molecules
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (MCAM (melanoma cell adhesion mol.), DNA methylation profiles in gene
         for and disease   ***susceptibility*** ; detection of variations in
         DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (MCC, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (MCIR, DNA methylation profiles and disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (MDK, DNA methylation profiles disease   ***susceptibility*** ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(MDS1, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (MEF2A, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (MEF2A, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (MEF2B, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (MEF2B, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (MEF2C, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (MEF2D, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (MEFV, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (MEN1, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (MET, DNA methylation profiles and disease   ***susceptibility***   ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)

IT   Proteins
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
            (MGP (matrix .gamma.-carboxyglutamic acid-contg. protein), DNA
            methylation profiles in gene for and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (MGP, DNA methylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT   Histocompatibility antigens
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
            (MHC (major histocompatibility complex), class I, DNA methylation
            profiles in gene for and disease   ***susceptibility*** ; detection of
            variations in DNA methylation profile of genes in detg. risk of
            disease)
IT   Histocompatibility antigens
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
            (MHC (major histocompatibility complex), class II, DNA methylation
            profiles in gene for and disease   ***susceptibility*** ; detection of
            variations in DNA methylation profile of genes in detg. risk of
            disease)
IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (MHC2TA, DNA methylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (MIDI, DNA methylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (MIP2, DNA methylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (MLF1, DNA methylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (MLHI, DNA methylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)

IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (MLL, DNA methylation profiles and disease ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (MLN, DNA methylation profiles and disease ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (MMP10, DNA methylation profiles and disease ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (MMP11, DNA methylation profiles and disease ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (MMP12, DNA methylation profiles and disease ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (MMP13, DNA methylation profiles and disease ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (MMP14, DNA methylation profiles and disease ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (MMP15, DNA methylation profiles and disease ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (MMP16, DNA methylation profiles and disease ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

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        (MMP17, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (MMP18, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (MMP19, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (MMP2, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (MMP3, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (MMP4, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
     RL: ANT (Analyte)
; THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES
     (Uses)
        (MMP5, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (MMP6, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (MMP7, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (MMP8, DNA methylation profiles and disease   ***susceptibility***  ;
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detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
    IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (MMP9, DNA methylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
    IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (MMPI, DNA methylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
    IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (MPE, DNA methylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
    IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (MPZ, DNA methylation profiles disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
    IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (MSH2, DNA methylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
    IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (MSH3, DNA methylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
    IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (MSH6, DNA methylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
    IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (MSX1, DNA methylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
    IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (MSX2, DNA methylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
    IT   Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
     (MTHFR, DNA methylation profiles and disease ***susceptibility*** ; detection of variations in DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
     (MTMI, DNA methylation profiles disease ***susceptibility*** ; detection of variations in DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
     (MTNRLA, DNA methylation profiles and disease ***susceptibility*** ; detection of variations in DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
     (MTNRLB, DNA methylation profiles and disease ***susceptibility*** ; detection of variations in DNA methylation profile of genes in detg. risk of disease)
IT   Proteins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
     (MTP (microsomal triglyceride-exchanging protein), DNA methylation profiles in gene for and disease ***susceptibility*** ; detection of variations in DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
     (MTP, DNA methylation profiles and disease ***susceptibility*** ; detection of variations in DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
     (MTR, DNA methylation profiles and disease ***susceptibility*** ; detection of variations in DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
     (MUC18, DNA methylation profiles and disease ***susceptibility*** ; detection of variations in DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
     (MUL, DNA methylation profiles and disease ***susceptibility*** ; detection of variations in DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

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             (MUM1, DNA methylation profiles and disease   ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
  IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (MUT, DNA methylation profiles and disease   ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
  IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (MXI1, DNA methylation profiles and disease   ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
  IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (MY06, DNA methylation profiles disease   ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
  IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (MY07A, DNA methylation profiles disease   ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
  IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (MYCL1, DNA methylation profiles and disease   ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
  IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (MYCN, DNA methylation profiles and disease   ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
  IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (MYF3, DNA methylation profiles disease   ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
  IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (MYF4, DNA methylation profiles disease   ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
  IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (Mdm2, DNA methylation profiles and disease   ***susceptibility***  ;
             detection of variations in DNA methylation profile of genes in detg.
             risk of disease)
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IT    Transcription factors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (Myf-5 (myogenic factor 5), DNA methylation profiles in gene for and
         disease  ***susceptibility***  ; detection of variations in DNA
         methylation profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (Myf-5, DNA methylation profiles disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (N, snRNP, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (N-ras, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (NAGLU, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (NAIP, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (NAIP, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (NAT1, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (NAT2, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
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(NB6, DNA methylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
    IT   Cell adhesion molecules
         RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
         (Biological study); USES (Uses)
            (NCAM (neural cell adhesion mol.), DNA methylation profiles in gene for
            and disease   ***susceptibility*** ; detection of variations in DNA
            methylation profile of genes in detg. risk of disease)
    IT   Cell adhesion molecules
         RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
         (Biological study); USES (Uses)
            (NCAM-L1 (neural cell adhesion mol. L1), DNA methylation profiles in
            gene for and disease   ***susceptibility*** ; detection of variations
            in DNA methylation profile of genes in detg. risk of disease)
    IT   Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (NCAM1, DNA methylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
    IT   Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (NCAM120, DNA methylation profiles and disease   ***susceptibility***
            ; detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
    IT   Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (NCAM2, DNA methylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
    IT   Cell adhesion molecules
         RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
         (Biological study); USES (Uses)
            (NCAM2, DNA methylation profiles in gene for and disease
             susceptibility ; detection of variations in DNA methylation
            profile of genes in detg. risk of disease)
    IT   Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (NDN, DNA methylation profiles disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
    IT   Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (NDP, ethylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
    IT   Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (NDPKA, DNA methylation profiles and disease   ***susceptibility*** ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)

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IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NDUFS1, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NDUFS4, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NDUFV1, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NEB, DNA methylation profiles disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NEC1, DNA methylation profiles disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Neurofilament proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (NF-H, DNA methylation profiles in gene for and disease
         ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Neurofilament proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (NF-L, DNA methylation profiles in gene for and disease
         ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NF1, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NF2, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
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(NF68, DNA methylation profiles disease   ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
    IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NFH, DNA methylation profiles disease   ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
    IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NGF, DNA methylation profiles and disease   ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
    IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NGFR, DNA methylation profiles and disease   ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
    IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NKNA, DNA methylation profiles and disease   ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
    IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NKNB, DNA methylation profiles and disease   ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
    IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NODAL, DNA methylation profiles and disease   ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
    IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NOS1, DNA methylation profiles disease   ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
    IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NOS2, DNA methylation profiles disease   ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
    IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NOS3, DNA methylation profiles and disease   ***susceptibility*** ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)

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IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NOTCH1, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NOTCH2, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NP, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NPHP1, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NPHP2, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NRL, DNA methylation profiles disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NSK2, DNA methylation profiles in and disease   ***susceptibility***
        ; detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NTRK1, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (NTS, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
     RL: ANT (Analyte)
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; THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
     (NTSR1, DNA methylation profiles and disease   ***susceptibility*** ; detection of variations in DNA methylation profile of genes in detg. risk of disease)
IT   Proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
        (Notch 3DNA methylation profiles in gene for and disease   ***susceptibility*** ; detection of variations in DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (OA1, DNA methylation profiles and disease   ***susceptibility*** ; detection of variations in DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (OCRL, DNA methylation profiles and disease   ***susceptibility*** ; detection of variations in DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (ON, DNA methylation profiles and disease   ***susceptibility*** ; detection of variations in DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (OPG, DNA methylation profiles and disease   ***susceptibility*** ; detection of variations in DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (OPN, DNA methylation profiles and disease   ***susceptibility*** ; detection of variations in DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (OTX1, DNA methylation profiles and disease   ***susceptibility*** ; detection of variations in DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (OTX2, DNA methylation profiles and disease   ***susceptibility*** ; detection of variations in DNA methylation profile of genes in detg. risk of disease)
IT   Gene, animal
     Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

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        (OX, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (OX1R, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (OX2R, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (OXCT, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
        (Oligophrenin 1, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT    Selectins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
        (P-, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PAFAH1, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PAFAH2, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
        (PAFR, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PAH, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
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IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PAI1, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PAI2, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PAM, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PARS, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PAX3, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PAX6, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PAX7, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PCI, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PCK1, DNA methylation profiles and disease   ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
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(PDDR, DNA methylation profiles and disease ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (PDGF, DNA methylation profiles and disease ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (PDGFB, DNA methylation profiles and disease ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (PDGFR, DNA methylation profiles and disease ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (PDHA, DNA methylation profiles and disease ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Cell adhesion molecules
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (PECAM-1 (platelet-endothelial cell adhesion mol. 1), DNA methylation
          profiles in gene for and disease ***susceptibility*** ; detection of
          variations in DNA methylation profile of genes in detg. risk of
          disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (PECAM1, DNA methylation profiles and disease ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (PENK, DNA methylation profiles and disease ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (PEPD, DNA methylation profiles and disease ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (PFKFB1, DNA methylation profiles and disease ***susceptibility*** ;
          detection of variations in DNA methylation profile of genes in detg.

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          risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PFKL, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PFKM, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PGDS, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PGKI, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PGKL, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PGY3, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PHB, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PHEX, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PHKA2, DNA methylation profiles and disease  ***susceptibility***  ;
        detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
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        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
           (PHYH, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
 IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (PIGA, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
 IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (PIM1, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
 IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (PITPN, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
 IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (PITX2, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
 IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (PITX3, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
 IT    Gene, animal
        Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (PKA, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
 IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (PKD2, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
 IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (PKDL, DNA methylation profiles and disease  ***susceptibility***  ;
           detection of variations in DNA methylation profile of genes in detg.
           risk of disease)
 IT    Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
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          (PKHDL, DNA methylation profiles and disease   ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (PKP1, DNA methylation profiles and disease   ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (PLF, DNA methylation profiles and disease   ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (PLG, DNA methylation profiles and disease   ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (PLRP2, DNA methylation profiles and disease   ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (PMCH, DNA methylation profiles and disease   ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (PML, DNA methylation profiles and disease susceptibility;
            ***detection***   of variations in DNA methylation profile of genes in
          detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (PMM2, DNA methylation profiles and disease susceptibility;
            ***detection***   of variations in DNA methylation profile of genes in
          detg. risk of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (PMP-22 (peripheral myelin protein, 22 kDa), DNA   ***methylation***
          profiles in gene for and disease susceptibility; detection of
          variations in DNA methylation profile of genes in detg. risk of
          disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (PMS1, DNA methylation profiles and disease susceptibility;
            ***detection***   of variations in DNA methylation profile of genes in
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          detg. risk of disease)
IT   Gene, animal
     Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PMS2, DNA methylation profiles and disease susceptibility; detection
         ***of***   variations in DNA methylation profile of genes in detg.
risk
        of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PN2, DNA methylation profiles and disease susceptibility;
         ***detection***   of variations in DNA methylation profile of genes in
        detg. risk of disease)
IT   Gene, animal
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (POMC, DNA methylation profiles and disease susceptibility; detection
         ***of***   variations in DNA methylation profile of genes in detg.
risk
        of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PPGB, DNA methylation profiles and disease susceptibility;
         ***detection***   of variations in DNA methylation profile of genes in
        detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PPOX, DNA methylation profiles and disease susceptibility;
         ***detection***   of variations in DNA methylation profile of genes in
        detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PPP1R3, DNA methylation profiles and disease susceptibility; detection
        of   ***variations***   in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PPP2R1B, DNA methylation profiles and disease susceptibility;
        detection of   ***variations***   in DNA methylation profile of genes
        in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PPT, DNA methylation profiles and disease susceptibility; detection
         ***of***   variations in DNA methylation profile of genes in detg.
risk
        of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PRH, DNA methylation profiles and disease susceptibility; detection of
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         variations    ***in***    DNA methylation profile of genes in detg. risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (PRKB, DNA methylation profiles and disease susceptibility; detection
          ***of***    variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (PRKCA, DNA methylation profiles and disease susceptibility; detection
          ***of***    variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (PRKCG, DNA methylation profiles and disease susceptibility;
          ***detection***    of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (PROC, DNA methylation profiles and disease susceptibility; detection
         of variations    ***in***    DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
         (PRODH, DNA methylation profiles and disease susceptibility;
          ***detection***    of variations in DNA methylation profile of genes in
         detg. risk of disease
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (PROP1, DNA methylation profiles and disease susceptibility;
          ***detection***    of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (PRPH, DNA methylation profiles and disease susceptibility; detection
          ***of***    variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (PRPS1, DNA methylation profiles and disease susceptibility;
          ***detection***    of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
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           (Biological study); USES (Uses)
              (PRSS7, DNA methylation profiles in gene for   ***and***   disease
              susceptibility; detection of variations in DNA methylation profile of
              genes in detg. risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (PSAP, DNA methylation profiles and disease susceptibility; detection
           ***of***   variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT     Gene, animal
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (PSD95, DNA methylation profiles and disease susceptibility; detection
           ***of***   variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT     Gene, animal
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (PSEN1, DNA methylation profiles and disease susceptibility;
           ***detection***   of variations in DNA methylation profile of genes in
          detg. risk of disease)
IT     Gene, animal
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (PSEN2, DNA methylation profiles and disease susceptibility; detection
          of   ***variations***   in DNA methylation profile of genes in detg.
          risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (PTCH, DNA methylation profiles and disease susceptibility; detection
           ***of***   variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT     Gene, animal
       Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (PTEN, DNA methylation profiles and disease susceptibility; detection
           ***of***   variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT     Proteins
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (PTEN, DNA methylation profiles in gene for and disease
           ***susceptibility***  ; detection of variations in DNA methylation
          profile of genes in detg. risk of disease)
IT     Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (PTGS2, DNA methylation profiles and disease susceptibility;
           ***detection***   of variations in DNA methylation profile of genes in
          detg. risk of disease)
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IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PTH, DNA methylation profiles and disease susceptibility; detection
         ***of***    variations in DNA methylation profile of genes in detg.
risk
        of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PTHLH, DNA methylation profiles and disease susceptibility; detection
        of  ***variations***   in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PTHR1, DNA methylation profiles and disease susceptibility; detection
        of variations   ***in***   DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PTHrP, DNA methylation profiles and disease susceptibility; detection
        of  ***variations***   in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PTPN12, DNA methylation profiles in and disease   ***susceptibility***
        ; detection of variations in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PTS, DNA methylation profiles and disease susceptibility; detection of
        variations   ***in***   DNA methylation profile of genes in detg. risk
        of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PVALB, DNA methylation profiles and disease susceptibility; detection
         ***of***    variations in DNA methylation profile of genes in detg.
risk
        of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PXMP3, DNA methylation profiles and disease susceptibility;
         ***detection***   of variations in DNA methylation profile of genes in
        detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (PXR1, DNA methylation profiles and disease susceptibility; detection
         ***of***    variations in DNA methylation profile of genes in detg.
risk
        of disease)
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IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (PYCS, DNA methylation profiles and disease susceptibility; detection
         of  ***variations***  in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (PYGL, DNA methylation profiles and disease susceptibility; detection
         of variations  ***in***  DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (Prnp, DNA methylation profiles and disease susceptibility; detection
          ***of***  variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (R-ras, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    G proteins (guanine nucleotide-binding proteins)
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (RAB3A, DNA methylation  ***profiles***  in gene for and disease
         susceptibility; detection of variations in DNA methylation profile of
         genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (RAB3a, DNA methylation profiles in and disease susceptibility;
          ***detection***  of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (RAG, DNA methylation profiles and disease susceptibility; detection
          ***of***  variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Retinoic acid receptors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (RAR-.alpha., DNA methylation profiles in  ***gene***  for and
         disease susceptibility; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT    Retinoic acid receptors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (RAR-.beta., DNA methylation profiles in gene  ***for***  and disease
         susceptibility; detection of variations in DNA methylation profile of
         genes in detg. risk of disease)
IT    Retinoic acid receptors
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     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (RAR-.gamma., DNA methylation profiles in gene   ***for***   and
        disease susceptibility; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (RARA, DNA methylation profiles and disease susceptibility;
         ***detection***   of variations in DNA methylation profile of genes in
        detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (RARB, DNA methylation profiles and disease susceptibility; detection
        of variations   ***in***   DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (RB1, DNA methylation profiles in and disease susceptibility; detection
         ***of***   variations in DNA methylation profile of genes in detg.
risk
        of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (RDX, DNA methylation profiles and disease susceptibility; detection of
         ***variations***   in DNA methylation profile of genes in detg. risk
of
        disease)
IT   DNA formation factors
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (RF-C (replication factor C), DNA methylation profiles   ***in***
        gene for and disease susceptibility; detection of variations in DNA
        methylation profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (RFC2, DNA methylation profiles and disease susceptibility; detection
         ***of***   variations in DNA methylation profile of genes in detg.
risk
        of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (RFX5, DNA methylation profiles and disease susceptibility; detection
        of   ***variations***   in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (RFXAP, DNA methylation profiles and disease susceptibility; detection
         ***of***   variations in DNA methylation profile of genes in detg.
risk
        of disease)
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IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (RHAG, DNA methylation profiles and disease susceptibility; detection
          of   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (RHCE, DNA methylation profiles and disease susceptibility; detection
          of   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (RHD, DNA methylation profiles and disease susceptibility; detection
          of   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (RHOK, DNA methylation profiles and disease susceptibility; detection
         of   ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (RIGUI, DNA methylation profiles and disease susceptibility; detection
         of   ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (RLBP1, DNA methylation profiles and disease susceptibility; detection
          of   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (RLN1, DNA methylation profiles in and disease   ***susceptibility***
         ; detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (RLN2, DNA methylation profiles in and disease susceptibility;
          detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (RPL17, DNA methylation profiles in and   ***disease***
         susceptibility; detection of variations in DNA methylation profile of

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           genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (RPP65, DNA methylation profiles and disease susceptibility; detection
         of   ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (RPP65, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (RPS19, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (RPX, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (RS, DNA methylation profiles in and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (RXRA, DNA methylation profiles and disease susceptibility; detection
         of   ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (RXRB, DNA methylation profiles and disease susceptibility;
          ***detection***   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (RXRG, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Retinoid X receptors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (RXR.alpha., DNA methylation profiles   ***in***   gene for and disease
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susceptibility; detection of variations in DNA methylation profile of
         genes in detg. risk of disease)
IT   Retinoid X receptors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (RXR.beta., DNA methylation profiles in gene for and   ***disease***
         susceptibility; detection of variations in DNA methylation profile of
         genes in detg. risk of disease)
IT   Retinoid X receptors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (RXR.gamma., DNA methylation profiles in gene for   ***and***   disease
         susceptibility; detection of variations in DNA methylation profile of
         genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (RYR1, DNA methylation profiles in and disease   ***susceptibility***
         ; detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Blood-group substances
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (Rh(D), DNA methylation profiles in gene   ***for***   and disease
         susceptibility; detection of variations in DNA methylation profile of
         genes in detg. risk of disease)
IT   Blood-group substances
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (Rh, DNA methylation profiles in gene for and disease susceptibility;
          detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Glycoproteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (Rhesus blood group-assocd., DNA methylation profiles in gene for and
         disease   ***susceptibility***   ; detection of variations in DNA
         methylation profile of genes in detg. risk of disease)
IT   Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (Rim, DNA methylation profiles and disease susceptibility;
          detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Calcium-binding proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (S-100, DNA methylation profiles in gene   ***for***   and disease
         susceptibility; detection of variations in DNA methylation profile of
         genes in detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (S100A3, DNA methylation profiles and disease susceptibility; detection
          of   variations in DNA methylation profile of genes in detg.
risk
         of disease)

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IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (S100A4, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Calcium-binding proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (S100A4, DNA methylation profiles in gene for   ***and***   disease
         susceptibility; detection of variations in DNA methylation profile of
         genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (S100A5, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (S100A7, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (S100A8, DNA methylation profiles and disease susceptibility; detection
         of variations   ***in***   DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (S100A9, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (S100P, DNA methylation profiles and disease susceptibility; detection
         of   ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT    Ribosomal proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (S19, DNA methylation profiles in gene   ***for***   and disease
         susceptibility; detection of variations in DNA methylation profile of
         genes in detg. risk of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (SAA (serum amyloid A), DNA methylation profiles in gene   ***for***
         and disease susceptibility; detection of variations in DNA methylation
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          profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (SAA, DNA methylation profiles and disease susceptibility; detection of
           ***variations***   in DNA methylation profile of genes in detg. risk
of
          disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (SAP (serum amyloid P component), DNA methylation profiles in
           ***gene***   for and disease susceptibility; detection of variations
in
          DNA methylation profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (SAP, DNA methylation profiles and disease susceptibility; detection of
           ***variations***   in DNA methylation profile of genes in detg. risk
of
          disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (SCA8, DNA methylation profiles disease susceptibility; detection of
          variations   ***in***   DNA methylation profile of genes in detg. risk
          of disease)
IT    Gene, animal
      Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
          (SCF, DNA methylation profiles and disease susceptibility;
           ***detection***      ***of***   variations in DNA methylation profile
of
          genes in detg. risk of disease
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (SCP2, DNA methylation profiles and disease susceptibility; detection
          of   ***variations***   in DNA methylation profile of genes in detg.
          risk of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (SCP2 (sterol carrier protein 2), DNA methylation profiles in gene
           ***for***   and disease susceptibility; detection of variations in DNA
          methylation profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (SDHL, DNA methylation profiles and disease susceptibility; detection
          of   ***variations***   in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
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      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SELE, DNA methylation profiles and disease susceptibility;
           ***detection***   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SELL, DNA methylation profiles and disease susceptibility; detection
           ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SELP, DNA methylation profiles disease susceptibility; detection
           ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SEMA3, DNA methylation profiles disease susceptibility; detection of
           ***variations***   in DNA methylation profile of genes in detg. risk
of
         disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SEMA5, DNA methylation profiles disease susceptibility;
           ***detection***   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SEMAE, DNA methylation profiles disease susceptibility; detection of
           ***variations***   in DNA methylation profile of genes in detg. risk
of
         disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SEMAW, DNA methylation profiles disease susceptibility; detection of
         variations in   ***DNA***   methylation profile of genes in detg. risk
         of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SGSH, DNA methylation profiles and disease susceptibility;
           ***detection***   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SH2D1A, DNA methylation profiles in and disease   ***susceptibility***
         ; detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
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RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (SHH, DNA methylation profiles and disease susceptibility; detection
            of   variations in DNA methylation profile of genes in detg.
risk
            of disease)
IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (SIX1, DNA methylation profiles and disease susceptibility; detection
            of variations   ***in***   DNA methylation profile of genes in detg.
            risk of disease)
IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (SIX2, DNA methylation profiles and disease susceptibility; detection
            of   variations in DNA methylation profile of genes in detg.
risk
            of disease)
IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (SIX5, DNA methylation profiles and disease susceptibility;
            detection   of variations in DNA methylation profile of genes in
            detg. risk of disease)
IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (SLAM, DNA methylation profiles and disease susceptibility; detection
            of   variations in DNA methylation profile of genes in detg.
risk
            of disease)
IT   Lymphokines
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
            (SLAM, DNA methylation profiles in gene for and disease susceptibility;
            detection   of variations in DNA methylation profile of genes in
            detg. risk of disease)
IT   Proteins
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
            (SLAM-assocd., DNA methylation profiles in gene for and disease
            susceptibility ; detection of variations in DNA methylation
            profile of genes in detg. risk of disease)
IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (SMARCSI, DNA methylation profiles in and disease susceptibility;
            detection   of variations in DNA methylation profile of genes in
            detg. risk of disease)
IT   Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (SMNI, DNA methylation profiles and disease susceptibility; detection
            of   ***variations***   in DNA methylation profile of genes in detg.
            risk of disease)
IT   Gene, animal

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     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (SMOH, DNA methylation profiles and disease susceptibility;
         ***detection***   of variations in DNA methylation profile of genes in
        detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (SMPD1, DNA methylation profiles disease susceptibility;
         ***detection***   of variations in DNA methylation profile of genes in
        detg. risk of disease)
IT   Proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (SNAP-25 (synaptosome-assocd. protein, 25 kDa), DNA methylation
         ***profiles***   in gene for and disease susceptibility; detection of
        variations in DNA methylation profile of genes in detg. risk of
        disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (SNAP25, DNA methylation profiles and disease susceptibility; detection
        of variations   ***in***   DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (SNCA, DNA methylation profiles and disease susceptibility; detection
         ***of***   variations in DNA methylation profile of genes in detg.
risk
        of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (SNCA, DNA methylation profiles in and disease susceptibility;
         ***detection***   of variations in DNA methylation profile of genes in
        detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (SNCB, DNA methylation profiles and disease susceptibility;
         ***detection***   of variations in DNA methylation profile of genes in
        detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (SNRPN, DNA methylation profiles and disease susceptibility; detection
        of   ***variations***   in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (SOD1, DNA methylation profiles and disease susceptibility; detection
         ***of***   variations in DNA methylation profile of genes in detg.
risk
        of disease)
IT   Gene, animal
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     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (SOD3, DNA methylation profiles and disease susceptibility; detection
         ***of***   variations in DNA methylation profile of genes in detg.
risk
        of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (SOX 11, DNA methylation profiles and disease susceptibility;
         ***detection***   of variations in DNA methylation profile of genes in
        detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (SOX11, DNA methylation profiles disease susceptibility; detection of
        variations in   ***DNA***   methylation profile of genes in detg. risk
        of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (SPG7, DNA methylation profiles disease susceptibility; detection
         ***of***   variations in DNA methylation profile of genes in detg.
risk
        of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (SPTAI, DNA methylation profiles and disease susceptibility; detection
        of   ***variations***   in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (SPTB, DNA methylation profiles disease susceptibility; detection of
         ***variations***   in DNA methylation profile of genes in detg. risk
of
        disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (SSAI, DNA methylation profiles and disease susceptibility; detection
         ***of***   variations in DNA methylation profile of genes in detg.
risk
        of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (SSX1, DNA methylation profiles and disease susceptibility; detection
        of   ***variations***   in DNA methylation profile of genes in detg.
        risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (SSX2, DNA methylation profiles and disease susceptibility; detection
        of variations in   ***DNA***   methylation profile of genes in detg.
        risk of disease)
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IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ST3, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ST8, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (STAR, DNA methylation profiles and disease susceptibility; detection
         of   ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT    Transcription factors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (STAT1 (signal transducer and activator of transcription 1),
          ***DNA***   methylation profiles in gene for and disease
         susceptibility; detection of variations in DNA methylation profile of
         genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (STAT1, DNA methylation profiles and disease susceptibility;
          ***detection***   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT    Transcription factors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (STAT2 (signal transducer and activator of transcription 2),
          ***DNA***   methylation profiles in gene for and disease
         susceptibility; detection of variations in DNA methylation profile of
         genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (STAT2, DNA methylation profiles and disease susceptibility; detection
         of   ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT    Transcription factors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (STAT3 (signal transducer and activator of transcription 3),
          ***DNA***   methylation profiles in gene for and disease
         susceptibility; detection of variations in DNA methylation profile of
         genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (STAT3, DNA methylation profiles and disease   ***susceptibility***  ;
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      detection of variations in DNA methylation profile of genes in detg.
      risk of disease)
IT    Transcription factors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (STAT4 (signal transducer and activator of transcription  ***4***  ),
         DNA methylation profiles in gene for and disease susceptibility;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (STAT4, DNA methylation profiles and disease susceptibility; detection
         of  ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT    Transcription factors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (STAT5 (signal transducer and activator of transcription 5),
          ***DNA***   methylation profiles in gene for and disease
         susceptibility; detection of variations in DNA methylation profile of
         genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (STAT5, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (STK11, DNA methylation profiles and disease susceptibility; detection
         of  ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (STK2, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (STS, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SUOX, DNA methylation profiles and disease susceptibility; detection
         of variations  ***in***   DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
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     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SV2, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SVAT, DNA methylation profiles and disease susceptibility; detection
         of  ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SYB2, DNA methylation profiles and disease susceptibility; detection
         of variations   ***in***   DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SYN1, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SYN2, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SYND1, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SYND2, DNA methylation profiles and disease susceptibility; detection
         of  ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SYND3, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SYND4, DNA methylation profiles and disease susceptibility; detection
         of  ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
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IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SYP, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SYT1, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SYT2, DNA methylation profiles and disease susceptibility;
          ***detection***   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SyB1, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Troponins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (T, DNA methylation profiles in gene for and disease susceptibility;
          ***detection***   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (TAL2, DNA methylation profiles and disease susceptibility; detection
         of variations   ***in***   DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (TAP, DNA methylation profiles and disease susceptibility; detection of
          ***variations***   in DNA methylation profile of genes in detg. risk
of
         disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (TAP2, DNA methylation profiles and disease susceptibility;
          ***detection***   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (TAT, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
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                profile of genes in detg. risk of disease)
IT    Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (TBG, DNA methylation profiles and disease susceptibility; detection
              ***of***   variations in DNA methylation profile of genes in detg.
risk
            of disease)
IT    Transcription factors
         RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
         (Biological study); USES (Uses)
            (TCF-1 (T-cell factor 1), DNA methylation profiles   ***in***   gene
            for and disease susceptibility; detection of variations in DNA
            methylation profile of genes in detg. risk of disease)
IT    Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (TCN1, DNA methylation profiles and disease susceptibility;
              ***detection***   of variations in DNA methylation profile of genes in
            detg. risk of disease)
IT    Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (TCN2, DNA methylation profiles and disease susceptibility;
              ***detection***   of variations in DNA methylation profile of genes in
            detg. risk of disease)
IT    Gene, animal
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use)
; BIOL (Biological study); USES (Uses)
            (TCRA, DNA methylation profiles and disease susceptibility; detection
              ***of***   variations in DNA methylation profile of genes in detg.
risk
            of disease)
IT    Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (TCRD, DNA methylation profiles and disease susceptibility; detection
              ***of***   variations in DNA methylation profile of genes in detg.
risk
            of disease)
IT    Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (TECTA, DNA methylation profiles in and disease susceptibility;
              ***detection***   of variations in DNA methylation profile of genes in
            detg. risk of disease)
IT    Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (TEK, DNA methylation profiles and disease susceptibility;
              ***detection***   of variations in DNA methylation profile of genes in
            detg. risk of disease)
IT    Gene, animal
         RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
         use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
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       (TEL, DNA methylation profiles and disease susceptibility; detection
         ***of***   variations in DNA methylation profile of genes in detg.
risk
       of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (TFAP2B, DNA methylation profiles in and disease susceptibility;
         detection of variations   ***in***   DNA methylation profile of genes
         in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (TFAP2C, DNA methylation profiles in and disease   ***susceptibility***
         ; detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Transforming growth factor receptors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (TGF-.beta. receptor, type II, DNA methylation profiles in   ***gene***
         for and disease susceptibility; detection of variations in DNA
         methylation profile of genes in detg. risk of disease)
IT    Transforming growth factor receptors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (TGF-.beta. receptor, type V, DNA methylation profiles   ***in***
         gene for and disease susceptibility; detection of variations in DNA
         methylation profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (TGFA, DNA methylation profiles and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
       of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (TGFB2, DNA methylation profiles and disease susceptibility;
          ***detection***   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (TGFBR2, DNA methylation profiles and disease susceptibility; detection
         of   ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (TH, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (THBD, DNA methylation profiles and disease susceptibility; detection
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         of   ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (THBSI, DNA methylation profiles and disease susceptibility;
          ***detection***   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (THPO, DNA methylation profiles and disease susceptibility; detection
         of variations in DNA   ***methylation***   profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (THRB, DNA methylation profiles and disease susceptibility; detection
         of variations in   ***DNA***   methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (THRTA, DNA methylation profiles and disease susceptibility; detection
         of variations in   ***DNA***   methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (THY1, DNA methylation profiles and disease   ***susceptibility***   ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (TIMP-1, DNA methylation profiles and disease susceptibility;
          ***detection***   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (TIMP-3, DNA methylation profiles and disease susceptibility; detection
         of variations   ***in***   DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (TIMP-4, DNA methylation profiles and disease susceptibility; detection
         of   ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (TKCR, DNA methylation profiles and disease susceptibility;
          ***detection***   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT    Gene, animal
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RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TKTL1, DNA methylation profiles in gene for and   ***disease***
susceptibility; detection of variations in DNA methylation profile of
genes in detg. risk of disease)
IT   Gene, animal
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TLN, DNA methylation profiles and disease susceptibility; detection of
variations   ***in***   DNA methylation profile of genes in detg. risk
of disease)
IT   Gene, animal
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TNA, DNA methylation profiles and disease susceptibility; detection of
variations   ***in***   DNA methylation profile of genes in detg. risk
of disease)
IT   Gene, animal
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TNFA, DNA methylation profiles and disease susceptibility; detection
of variations   ***in***   DNA methylation profile of genes in detg.
risk of disease)
IT   Gene, animal
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TNFAR, DNA methylation profiles and disease susceptibility;
 detection   of variations in DNA methylation profile of genes in
detg. risk of disease)
IT   Gene, animal
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TNFB, DNA methylation profiles and disease susceptibility;
 detection   of variations in DNA methylation profile of genes in
detg. risk of disease)
IT   Gene, animal
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TNFBR, DNA methylation profiles and disease susceptibility; detection
of   ***variations***   in DNA methylation profile of genes in detg.
risk of disease)
IT   Gene, animal
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TNN13, DNA methylation profiles and disease susceptibility; detection
of   ***variations***   in DNA methylation profile of genes in detg.
risk of disease)
IT   Gene, animal
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TNNT2, DNA methylation profiles and disease susceptibility; detection
of   ***variations***   in DNA methylation profile of genes in detg.
risk of disease)
IT   Gene, animal
RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(TNXA, DNA methylation profiles and disease susceptibility; detection

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               ***of***    variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TP73, DNA methylation profiles and disease susceptibility; detection
          ***of***    variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TPA, DNA methylation profiles and disease susceptibility; detection
          ***of***    variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TPH, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
          profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TPI1, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
          profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TPM3, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
          profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TPT1, DNA methylation profiles and disease susceptibility; detection
          ***of***    variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TRAF1, DNA methylation profiles and disease susceptibility; detection
          ***of***    variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TRAF2, DNA methylation profiles and disease susceptibility; detection
          ***of***    variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT   Gene, animal
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       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TRAF3, DNA methylation profiles and disease susceptibility; detection
           ***of***   variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT    Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TRAF4, DNA methylation profiles and disease susceptibility; detection
           ***of***   variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT    Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TRAF5, DNA methylation profiles and disease susceptibility; detection
           ***of***   variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT    Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TRAF6, DNA methylation profiles and disease susceptibility; detection
           ***of***   variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT    Cytokine receptors
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (TRAIL, DNA methylation profiles in gene for and disease
           ***susceptibility***   ; detection of variations in DNA methylation
          profile of genes in detg. risk of disease)
IT    Cytokine receptors
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (TRAIL-R3, DNA methylation profiles in gene for and   ***disease***
          susceptibility; detection of variations in DNA methylation profile of
          genes in detg. risk of disease)
IT    Gene, animal
       Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TRC8, DNA methylation profiles and disease susceptibility; detection
          of   ***variations***   in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TRH, DNA methylation profiles and disease susceptibility;
           ***detection***   of variations in DNA methylation profile of genes in
          detg. risk of disease)
IT    Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TRHR, DNA methylation profiles and disease susceptibility; detection
          of variations in   ***DNA***   methylation profile of genes in detg.
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risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TSC1, DNA methylation profiles and disease susceptibility; detection
          of variations   ***in***   DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TSC2, DNA methylation profiles and disease susceptibility;
           detection   of variations in DNA methylation profile of genes in
          detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TSG101, DNA methylation profiles and disease susceptibility; detection
          of variations   ***in***   DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TSPY, DNA methylation profiles and disease susceptibility; detection
          of   ***variations***   in DNA methylation profile of genes in detg.
          risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TTPA, DNA methylation profiles and disease susceptibility; detection
           of   variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (TULP1, DNA methylation profiles in gene for   ***and***   disease
          susceptibility; detection of variations in DNA methylation profile of
          genes in detg. risk of disease)
IT   Antigens
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (Thy-1, DNA methylation profiles in gene for   ***and***   disease
          susceptibility; detection of variations in DNA methylation profile of
          genes in detg. risk of disease)
IT   Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (Tip-assocd., DNA methylation profiles of gene for and   ***disease***
          susceptibility; detection of variations in DNA methylation profile of
          genes in detg. risk of disease)
IT   Neurotrophic factor receptors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (TrkA, DNA methylation profiles in gene for   ***and***   disease
          susceptibility; detection of variations in DNA methylation profile of
          genes in detg. risk of disease)
IT   Gene, animal

RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (UCP3, DNA methylation profiles and disease susceptibility; detection
           of   variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT   Gene, animal
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (UCP3, DNA methylation profiles in and disease susceptibility;
          detection   ***of***   variations in DNA methylation profile of genes
          in detg. risk of disease)
IT   Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (UFD1L, DNA methylation profiles and disease susceptibility;
           detection   of variations in DNA methylation profile of genes in
          detg. risk of disease)
IT   Gene, animal
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (UGT2, DNA methylation profiles in and disease susceptibility;
           detection   of variations in DNA methylation profile of genes in
          detg. risk of disease)
IT   Gene, animal
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (UGTL, DNA methylation profiles in and disease susceptibility;
          detection   ***of***   variations in DNA methylation profile of genes
          in detg. risk of disease)
IT   Gene, animal
       RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
       (Biological study); USES (Uses)
          (UMPK, DNA methylation profiles in and disease susceptibility;
           detection   of variations in DNA methylation profile of genes in
          detg. risk of disease)
IT   Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (UMPS, DNA methylation profiles in and disease susceptibility;
           detection   of variations in DNA methylation profile of genes in
          detg. risk of disease)
IT   Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (UOX, DNA methylation profiles in gene for and disease susceptibility;
           detection   of variations in DNA methylation profile of genes in
          detg. risk of disease)
IT   Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (UPA, DNA methylation profiles and disease susceptibility; detection of
          variations in DNA   ***methylation***   profile of genes in detg. risk
          of disease)
IT   Gene, animal
       RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
       use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

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          (UPAR, DNA methylation profiles and disease susceptibility; detection
          of  ***variations***   in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (UROS, DNA methylation profiles in gene for and  ***disease***
          susceptibility; detection of variations in DNA methylation profile of
          genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (USH2A, DNA methylation profiles in gene for  ***and***   disease
          susceptibility; detection of variations in DNA methylation profile of
          genes in detg. risk of disease)
IT    Glycoproteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (V, DNA methylation profiles in gene for and disease
           ***susceptibility***  ; detection of variations in DNA methylation
          profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (VAMP8, DNA methylation profiles in gene for and disease
          susceptibility;  ***detection***   of variations in DNA methylation
          profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (VDR, DNA methylation profiles in and disease susceptibility; detection
           ***of***   variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (VHL, DNA methylation profiles and disease susceptibility; detection of
           ***variations***   in DNA methylation profile of genes in detg. risk
of
          disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (VIM, DNA methylation profiles in and disease  ***susceptibility***  ;
          detection of variations in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (VIP, DNA methylation profiles and disease susceptibility; detection
           ***of***   variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
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            (VIPR, DNA methylation profiles and disease susceptibility; detection
             ***of***   variations in DNA methylation profile of genes in detg.
risk
            of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (VLDLR, DNA methylation profiles and disease susceptibility;
             ***detection***   of variations in DNA methylation profile of genes in
            detg. risk of disease)
IT    Gene, animal
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use)
; BIOL (Biological study); USES (Uses)
            (VMAT1, DNA methylation profiles in gene for   ***and***   disease
            susceptibility; detection of variations in DNA methylation profile of
            genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (VMAT2, DNA methylation profiles in gene for   ***and***   disease
            susceptibility; detection of variations in DNA methylation profile of
            genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (VPP1, DNA methylation profiles and disease susceptibility; detection
             ***of***   variations in DNA methylation profile of genes in detg.
risk
            of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (VPP3, DNA methylation profiles and disease susceptibility; detection
             ***of***   variations in DNA methylation profile of genes in detg.
risk
            of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (VVTI, DNA methylation profiles and disease susceptibility; detection
             ***of***   variations in DNA methylation profile of genes in detg.
risk
            of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
            (Vitamin B12-binding, DNA methylation profiles in gene for   ***and***
            disease susceptibility; detection of variations in DNA methylation
            profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (WASP, DNA methylation profiles and disease   ***susceptibility***  ;
            detection of variations in DNA methylation profile of genes in detg.
            risk of disease)
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IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (WFS1, DNA methylation profiles and disease susceptibility; detection
          ***of***    variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (WHN, DNA methylation profiles and disease susceptibility; detection of
          ***variations***    in DNA methylation profile of genes in detg. risk
of
         disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (WHSC1, DNA methylation profiles and disease susceptibility; detection
         of variations    ***in***    DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (WRN, DNA methylation profiles and disease susceptibility; detection of
          ***variations***    in DNA methylation profile of genes in detg. risk
of
         disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (WT2, DNA methylation profiles and disease   ***susceptibility***   ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (WT4, DNA methylation profiles and disease susceptibility; detection of
          ***variations***    in DNA methylation profile of genes in detg. risk
of
         disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (Wnt1, DNA methylation profiles and disease susceptibility; detection
         of variations    ***in***    DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (XDH, DNA methylation profiles in and disease susceptibility; detection
         of    ***variations***    in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (XPA, DNA methylation profiles in and disease susceptibility; detection
         of    ***variations***    in DNA methylation profile of genes in detg.
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            risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (XPC, DNA methylation profiles in and disease susceptibility; detection
         of variations   ***in***   DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (XPF, DNA methylation profiles in and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (XRCC9, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
         profile of genes in detg. risk of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (Y, DNA methylation profiles in gene for and disease susceptibility;
         detection   ***of***   variations in DNA methylation profile of genes
         in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (YY1, DNA methylation profiles and disease susceptibility; detection of
          ***variations***   in DNA methylation profile of genes in detg. risk
of
         disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (YY1, DNA methylation profiles in and disease susceptibility; detection
          ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ZIC2, DNA methylation profiles and disease susceptibility; detection
         of variations in   ***DNA***   methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (ZIC3, DNA methylation profiles and disease susceptibility; detection
         of variations   ***in***   DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (abl1, DNA methylation profiles and disease susceptibility; detection
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                ***of***    variations in DNA methylation profile of genes in detg.
risk
          of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (abl2, DNA methylation profiles and disease susceptibility; detection
          of variations   ***in***   DNA methylation profile of genes in detg.
          risk of disease)
IT    Transport proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (acidic amino acid transporter, DNA methylation profiles in gene for
            ***and***   disease susceptibility; detection of variations in DNA
          methylation profile of genes in detg. risk of disease)
IT    Transport proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (acylcarnitine-carnitine transporter, DNA methylation profiles in gene
          for   ***and***   disease susceptibility; detection of variations in
          DNA methylation profile of genes in detg. risk of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (adducin, DNA methylation profiles in gene for and disease
            ***susceptibility***  ; detection of variations in DNA methylation
          profile of genes in detg. risk of disease)
IT    Behavior
          (aggressive, detn. of genetic susceptibility to; detection of
          variations in DNA methylation   ***profile***   of genes in detg. risk
          of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (akt1, DNA methylation profiles and disease susceptibility; detection
          of   ***variations***   in DNA methylation profile of genes in detg.
          risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
          (akt2, DNA methylation profiles and disease susceptibility; detection
          of   ***variations***   in DNA methylation profile of genes in detg.
          risk of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (amyloid precursor binding, DNA methylation profiles in gene for
            ***and***   disease susceptibility; detection of variations in DNA
          methylation profile of genes in detg. risk of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
          (amyloid precursor-like, DNA methylation profiles in gene for and
          disease   ***susceptibility***  ; detection of variations in DNA
          methylation profile of genes in detg. risk of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
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        (Biological study); USES (Uses)
           (apoptosis-regulating, Apoptosis inducing factor, DNA methylation
           profiles in gene for   ***and***   disease susceptibility; detection of
           variations in DNA methylation profile of genes in detg. risk of
           disease)
IT    Receptors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
           (aspartate, DNA methylation profiles in gene for and disease
           susceptibility; detection of   ***variations***   in DNA methylation
           profile of genes in detg. risk of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
           (astrotactins, DNA methylation profiles in gene for and disease
           susceptibility;   ***detection***   of variations in DNA methylation
           profile of genes in detg. risk of disease)
IT    Nervous system, disease
           (ataxia telangiectasia, DNA methylation profiles in gene for and
            ***disease***   susceptibility; detection of variations in DNA
           methylation profile of genes in detg. risk of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
           (atrophin 1, DNA methylation profiles in gene for and   ***disease***
           susceptibility; detection of variations in DNA methylation profile of
           genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (axl, DNA methylation profiles and disease susceptibility; detection
            ***of***   variations in DNA methylation profile of genes in detg.
risk
           of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
           (band 4.1, DNA methylation profiles in gene for and   ***disease***
           susceptibility; detection of variations in DNA methylation profile of
           genes in detg. risk of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
           (band 4.2, DNA methylation profiles in gene for and   ***disease***
           susceptibility; detection of variations in DNA methylation profile of
           genes in detg. risk of disease)
IT    Proteins
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
           (band 7.2, DNA methylation profiles in gene for and disease
            ***susceptibility***   ; detection of variations in DNA methylation
           profile of genes in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
           (bcl-1, DNA methylation profiles and disease susceptibility; detection
           of variations in DNA methylation   ***profile***   of genes in detg.
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              risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (bcl-3, DNA methylation profiles and disease susceptibility; detection
           ***of***   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT    Neurotrophic factor receptors
      Neurotrophic factors
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (brain-derived, DNA methylation profiles in gene   ***for***   and
         disease  ***susceptibility***  ; detection of variations in DNA
         methylation profile of genes in detg. risk of disease)
IT    Genetic element
      RL: BSU (Biological study, unclassified); BIOL (Biological study)
         (breakpoint cluster region, detection of methylation in; detection of
           ***variations***   in DNA methylation profile of genes in detg. risk
of
         disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (c-Fes, DNA methylation profiles and disease  ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (c-Ha-ras, DNA methylation profiles and disease  ***susceptibility***
         ; detection of variations in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (c-erbA, DNA methylation profiles and disease susceptibility; detection
         of  ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (c-erbB, DNA methylation profiles in and disease susceptibility;
         detection  ***of***   variations in DNA methylation profile of genes
         in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (c-erbB3, DNA methylation profiles and disease susceptibility;
         detection  ***of***   variations in DNA methylation profile of genes
         in detg. risk of disease)
IT    Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (c-erbB4, DNA methylation profiles and disease susceptibility;
         detection  ***of***   variations in DNA methylation profile of genes
         in detg. risk of disease)
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IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (c-jun, DNA methylation profiles and disease susceptibility;
          detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (c-kit, DNA methylation profiles and disease susceptibility;
          detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (c-mos, DNA methylation profiles and disease susceptibility;
          detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (c-mpl, DNA methylation profiles and disease susceptibility;
          detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (c-myb, DNA methylation profiles and disease susceptibility;
          detection   of variations in DNA methylation profile of genes in
         detg. risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (c-myc, DNA methylation profiles and disease susceptibility; detection
         of   ***variations***   in DNA methylation profile of genes in detg.
         risk of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (c-ros, DNA methylation profiles and disease susceptibility; detection
          of   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (c-src, DNA methylation profiles and disease susceptibility; detection
          of   variations in DNA methylation profile of genes in detg.
risk
         of disease)
IT   Gene, animal
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (c-yes, DNA methylation profiles and disease susceptibility; detection
         of variations   ***in***   DNA methylation profile of genes in detg.
         risk of disease)
IT   Transport proteins

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     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (calcium transporter, DNA methylation profiles in gene for   ***and***
        disease susceptibility; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Calcium-binding proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (calgranulin A, DNA methylation profiles in gene for   ***and***
        disease susceptibility; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Transport proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (carnitine-transporting, DNA methylation profiles in gene for
         ***and***   disease susceptibility; detection of variations in DNA
        methylation profile of genes in detg. risk of disease)
IT   Caveolins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (caveolin 3, DNA methylation profiles in gene for and   ***disease***
        susceptibility; detection of variations in DNA methylation profile of
        genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (cdk2, DNA methylation profiles and disease susceptibility; detection
         ***of***    variations in DNA methylation profile of genes in detg.
risk
        of disease)
IT   Injury
        (cerebral, detn. of genetic susceptibility to behavioral consequences
        of; detection of   ***variations***   in DNA methylation profile of
        genes in detg. risk of disease)
IT   Neurotrophic factor receptors
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (ciliary, DNA methylation profiles in gene for   ***and***   disease
        susceptibility; detection of variations in DNA methylation profile of
        genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (clk1, DNA methylation profiles and disease susceptibility; detection
        of variations   ***in***   DNA methylation profile of genes in detg.
        risk of disease)
IT   Proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (cochlins, DNA methylation profiles in gene for and disease
        susceptibility;   ***detection***   of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (cofilin, DNA methylation profiles in gene for and   ***disease***
        susceptibility; detection of variations in DNA methylation profile of
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              genes in detg. risk of disease)
     IT   Receptors
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)
             (collagen, DNA methylation profiles in gene for and disease
             susceptibility;  ***detection***   of variations in DNA methylation
             profile of genes in detg. risk of disease)
     IT   Proteins
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)
             (contactin, DNA methylation profiles in gene for and disease
              ***susceptibility***  ; detection of variations in DNA methylation
             profile of genes in detg. risk of disease)
     IT   Transport proteins
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)
             (copper transporter, DNA methylation profiles in gene for   ***and***
             disease susceptibility; detection of variations in DNA methylation
             profile of genes in detg. risk of disease)
     IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (cot, DNA methylation profiles and disease susceptibility; detection
              ***of***   variations in DNA methylation profile of genes in detg.
risk
             of disease)
     IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (crk, DNA methylation profiles and disease susceptibility; detection
              ***of***   variations in DNA methylation profile of genes in detg.
risk
             of disease)
     IT   Gene, animal
          RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
          use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
             (crkI, DNA methylation profiles and disease susceptibility; detection
             of variations   ***in***   DNA methylation profile of genes in detg.
             risk of disease)
     IT   Ion channel
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)
             (cyclic nucleotide-gated, DNA methylation profiles in gene for and
             disease   ***susceptibility***  ; detection of variations in DNA
             methylation profile of genes in detg. risk of disease)
     IT   Proteins
          RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
          (Biological study); USES (Uses)
             (cystinosin, DNA methylation profiles in gene for and   ***disease***
             susceptibility; detection of variations in DNA methylation profile of
             genes in detg. risk of disease)
     IT   Mental and behavioral disorders
             (dementia, detn. of genetic susceptibility to; detection of
              ***variations***   in DNA methylation profile of genes in detg. risk
of
             disease)
     IT   Human
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        Methylation
        Test kits
            (detection of variations in DNA methylation profile of genes in
              ***detg***  . risk of disease)
IT      Bone, disease
        Cardiovascular system, disease
        Connective tissue, disease
        Developmental disorders
        Digestive tract, disease
        Endocrine system, disease
        Headache
        Infection
        Inflammation
        Mental and behavioral disorders
        Muscle, disease
        Neoplasm
        Respiratory system, disease
        Sexual disorders
        Skin, disease
            (detn. of genetic susceptibility to; detection of variations   ***in***
              ***DNA***     ***methylation***     ***profile***   of genes in detg.
            risk of disease)
IT      Drugs
            (detn. of risk of side effects; detection of variations in DNA
              ***methylation***   profile of genes in detg. risk of disease)
IT      Susceptibility (genetic)
            (detn. of; detection of variations in DNA methylation   ***profile***
            of genes in detg. risk of disease)
IT      Gene, animal
        RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
        use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
            (dhh, DNA methylation profiles and disease susceptibility; detection of
            variations   ***in***   DNA methylation profile of genes in detg. risk
            of disease)
IT      Proteins
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
            (diaphanous 1, DNA methylation profiles in gene for and   ***disease***
            susceptibility; detection of variations in DNA methylation profile of
            genes in detg. risk of disease)
IT      Proteins
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
            (diaphanous 2, DNA methylation profiles in gene for and   ***disease***
            susceptibility; detection of variations in DNA methylation profile of
            genes in detg. risk of disease)
IT      Central nervous system
            (disease, detn. of genetic susceptibility to; detection of variations
              ***in***   DNA methylation profile of genes in detg. risk of disease)
IT      Proteins
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
        (Biological study); USES (Uses)
            (doublecortins, DNA methylation profiles in gene for and disease
            susceptibility; detection   ***of***   variations in DNA methylation
            profile of genes in detg. risk of disease)
IT      Proteins
        RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
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(Biological study); USES (Uses)
   (dysfedins, DNA methylation profiles in gene for and disease
   susceptibility; detection   ***of***   variations in DNA methylation
   profile of genes in detg. risk of disease)
IT   Proteins
    RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
    (Biological study); USES (Uses)
       (dyskerins, DNA methylation profiles in gene for and disease
       susceptibility; detection   ***of***   variations in DNA methylation
       profile of genes in detg. risk of disease)
IT   Translation initiation factors
    RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
    (Biological study); USES (Uses)
       (eIF-4E, DNA methylation profiles in gene for and   ***disease***
       susceptibility; detection of variations in DNA methylation profile of
       genes in detg. risk of disease)
IT   Gene, animal
    RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
    use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
       (ect2, DNA methylation profiles and disease susceptibility; detection
       of variations   ***in***   DNA methylation profile of genes in detg.
       risk of disease)
IT   Flavoproteins
    RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
    (Biological study); USES (Uses)
       (electron transfer flavoprotein, DNA methylation profiles in gene
       for   and disease susceptibility; detection of variations in DNA
       methylation profile of genes in detg. risk of disease)
IT   Proteins
    RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
    (Biological study); USES (Uses)
       (emerin, DNA methylation profiles in gene for and disease
       susceptibility   ; detection of variations in DNA methylation
       profile of genes in detg. risk of disease)
IT   Gene, animal
    RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
    use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
       (ems1, DNA methylation profiles and disease susceptibility; detection
       of   ***variations***   in DNA methylation profile of genes in detg.
       risk of disease)
IT   Probes (nucleic acid)
    RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
       (for detection of uracil in DNA as   ***indicator***   of methylation;
       detection of variations in DNA methylation profile of genes in detg.
       risk of disease)
IT   Gene, animal
    RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
    use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
       (fos, DNA methylation profiles and disease susceptibility; detection of
       variations   ***in***   DNA methylation profile of genes in detg. risk
       of disease)
IT   Gene, animal
    RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
    use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
       (fps, DNA methylation profiles and disease susceptibility; detection of
       variations   ***in***   DNA methylation profile of genes in detg. risk
       of disease)

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IT   Proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (frataxin, DNA methylation profiles in gene for and disease
        susceptibility;   ***detection***   of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (gap junction-specific, DNA methylation profiles in gene for and
        disease   ***susceptibility***   ; detection of variations in DNA
        methylation profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (gas-3, DNA methylation profiles and disease susceptibility; detection
        of   ***variations***   in DNA methylation profile of genes in detg.
        risk of disease)
IT   Transcription factors
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (gene EWS, DNA methylation profiles in gene for and disease
         ***susceptibility***   ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (gephyrins, DNA methylation profiles in gene for and disease
        susceptibility; detection   ***of***   variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Neurotrophic factors
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (glial-derived, DNA methylation profiles in gene for and
         ***disease***   susceptibility; detection of variations in DNA
        methylation profile of genes in detg. risk of disease)
IT   Transport proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (glucose-6-phosphatase translocating, DNA methylation profiles in gene
         ***for***   and disease susceptibility; detection of variations in DNA
        methylation profile of genes in detg. risk of disease)
IT   Transport proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (glutamine transporter, DNA methylation profiles in gene for and
         ***disease***   susceptibility; detection of variations in DNA
        methylation profile of genes in detg. risk of disease)
IT   Transport proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (glycine transporter, DNA methylation profiles in gene for and disease
         ***susceptibility***   ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
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(gro1, DNA methylation profiles and disease susceptibility; detection
          of   variations in DNA methylation profile of genes in detg.
risk
        of disease)
IT   Gene, animal
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (gro2, DNA methylation profiles and disease susceptibility; detection
          of   variations in DNA methylation profile of genes in detg.
risk
        of disease)
IT   Proteins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (guanylate cyclase activating, DNA methylation profiles in gene for and
          disease   susceptibility; detection of variations in DNA
     methylation profile of genes in detg. risk of disease)
IT   G proteins (guanine nucleotide-binding proteins)
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (gustducins, .alpha. subunit,   ***DNA***   methylation profiles in
        gene for and disease susceptibility; detection of variations in DNA
        methylation profile of genes in detg. risk of disease)
IT   Antibodies and Immunoglobulins
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (heavy chain, DNA   ***methylation***   profiles in gene for and
        disease susceptibility; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   9024-52-6   9026-51-1
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (A, DNA methylation profiles in gene for and disease
          susceptibility   ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   9016-17-5
     RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (D, DNA methylation profiles in gene for and disease
          susceptibility   ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   9012-96-8, Cystathionase
     RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
     use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
        (DNA methylation profiles in gene for and disease
          susceptibility   ; detection of variations in DNA methylation
        profile of genes in detg. risk of disease)
IT   9000-90-2, .alpha.-Amylase   9000-94-6, Antithrombin III   9000-96-8,
     Arginase   9000-04-1, Pyruvate decarboxylase   9001-05-2, Catalase
     9001-10-9, Pepsinogen   9001-12-1, Matrix metalloproteinase 8   9001-16-5,
     Cytochrome c oxidase   9001-18-7, Dihydrolipoamide dehydrogenase
     9001-30-3, Blood-coagulation factor XII   9001-41-6, Phosphoglucose
     isomerase   9001-42-7, .alpha.-Glucosidase   9001-45-0,
     .beta.-Glucuronidase   9001-47-2, Glutaminase   9001-52-9,
     Fructose-1,6-diphosphatase   9001-67-6, Neuraminidase   9001-75-6, Pepsin
     9001-77-8, Acid phosphatase   9001-80-3, Phosphofructokinase   9001-81-4,
     Phosphoglucomutase   9001-83-6, Phosphoglycerate kinase   9001-88-1,

Phosphorylase kinase   9001-91-6, Plasminogen   9001-97-2, Glycogen
branching enzyme   9002-02-2, Succinate dehydrogenase   9002-12-4, Urate
oxidase   9002-64-6, Parathyroid hormone   9002-69-1D, Relaxin, isoforms
9002-76-0, Gastrin   9004-02-8, Lipoprotein lipase   9004-06-2, Matrix
metalloproteinase 12   9007-43-6, Cytochrome c, biological studies
9012-25-3, Catechol-o-methyltransferase   9012-33-3, Hexosaminidase
9012-47-9, Amylo-1,6-glucosidase   9012-78-6, Choline acetyltransferase
9012-93-5, Ferrochelatase   9013-08-5, Phosphoenolpyruvate carboxykinase
9013-38-1, Dopamine .beta.-hydroxylase   9013-55-2, Blood-coagulation
factor XI   9013-56-3, Factor XIII   9013-75-6, Histidase   9014-08-8,
Enolase   9014-19-1, Pyruvate carboxylase   9014-36-2, Succinate
thiokinase   9014-42-0, Thrombopoietin   9014-55-5, Tyrosine
aminotransferase   9014-56-6, Glycogen synthase   9014-74-8, Enterokinase
9015-81-0, 17.beta. Hydroxysteroid dehydrogenase   9015-82-1, Angiotensin
converting enzyme   9015-83-2, Phosphoribosyl pyrophosphate synthetase
9015-94-5, Renin, biological studies   9023-58-9, Arginosuccinate
synthetase   9023-64-7, Glutamate cysteine ligase   9023-69-2, Asparagine
synthetase   9023-70-5, Glutamine synthase   9023-78-3, Triosephosphate
isomerase   9023-90-9, MethylmalonylCoA mutase   9023-93-2, Acetyl CoA
carboxylase   9023-99-8, Cystathionine .beta. synthase   9024-58-2,
Glutamate decarboxylase   9024-78-6, Kynureninase   9025-26-7, Cathepsin D
9025-32-5   9025-35-8, .alpha. Galactosidase A   9025-42-7, Mannosidase,
.alpha.   9025-43-8, Mannosidase, .beta.   9025-62-1, Steroid sulfatase
9025-90-5, Hydroxyacyl glutathione hydrolase   9026-22-6, UDP-glucose
pyrophosphorylase   9027-21-8, Carnosinase   9027-33-2,
N-Acetyltransferase   9027-34-3   9027-43-4, 3-Oxoacid CoA transferase
9027-44-5, HMG-CoA synthase   9027-46-7, Thiolase   9027-56-9,
N-Acetylglucosaminidase   9027-65-0, Medium chain Acyl CoA dehydrogenase
9027-88-7, Short chain Acyl CoA dehydrogenase   9027-89-8,
Galactocerebrosidase   9027-96-7, Citrate synthase   9028-16-4, Xylitol
dehydrogenase   9028-31-3, Aldose reductase   9028-86-8, Aldehyde
dehydrogenase   9029-12-3, Glutamate dehydrogenase   9029-38-3, Sulfite
oxidase   9029-49-6, Homogentisate 1,2 dioxygenase   9029-61-2, Kynurenine
hydroxylase   9029-72-5, 4-Hydroxyphenylpyruvate dioxygenase   9029-73-6
9029-90-7, Carnitine acetyltransferase   9029-97-4, Acetyl CoA
acyltransferase   9030-08-4, UDP-glucuronosyltransferase   9030-21-1,
Purine nucleoside phosphorylase   9030-42-6, Ornithine
.delta.-aminotransferase   9030-50-6, Ketohexokinase   9030-66-4, Glycerol
kinase   9030-83-5, HMG-CoA lyase   9031-02-1, .alpha.-Ketoglutarate
dehydrogenase   9031-14-5, Lecithin cholesterol acyltransferase
9031-37-2, Ceruloplasmin   9031-72-5, Alcohol dehydrogenase   9031-86-1,
Aspartoacylase   9031-96-3, Peptidase A   9032-02-4   9032-15-9,
.alpha.-Dextrinase   9032-25-1, NADH cytochrome b5 reductase   9032-88-6,
Fumarase   9034-40-6, LHRH   9035-34-1, Cytochrome a   9035-58-9, Blood
coagulation Factor III   9035-74-9, Glycogen phosphorylase   9035-75-0,
Chymotrypsinogen   9036-22-0, Tyrosine hydroxylase   9036-23-1, Uridine
monophosphate kinase   9036-37-7, .delta.-Aminolevulinate dehydratase
9037-21-2, Tryptophan hydroxylase   9037-65-4, Fucosidase, .alpha.-L-
9039-53-6, Urokinase   9041-46-7   9042-64-2, DOPA decarboxylase
9044-85-3, 3.beta. Hydroxysteroid dehydrogenase   9047-22-7, Cathepsin B
9050-70-8, Proline dehydrogenase   9054-54-0, Transacylase   9054-65-3,
Branched chain aminotransferase   9054-75-5, Guanylyl cyclase   9054-84-6,
Xanthine dehydrogenase   9054-89-1, Superoxide dismutase   9054-94-8,
Galactosyltransferase, uridine diphosphogalactose-acetylglucosamine
9055-02-1, Prekallikrein   9055-67-8, Poly(ADPribose) synthetase
9056-26-2, Peptidase B   9059-22-7, Heme oxygenase   9061-61-4, Nerve
growth factor   9067-69-0, Acetylgalactosaminyltransferase, [blood-group

substance] .alpha.   9068-68-2, Arylsulfatase A   9068-75-1, Glucagon
synthetase   9073-56-7, .alpha.-L-Iduronidase   9074-10-6, Biliverdin
reductase   9075-24-5, Aspartylglucosaminidase   9079-67-8, NADH
dehydrogenase   9080-21-1, 7-Dehydrocholesterol reductase   9082-57-9,
Inosine triphosphatase   9082-72-8   11016-39-0, Properdin   11085-36-2,
Human placental lactogen   12651-27-3, Transcobalamin 1   12651-28-4,
Transcobalamin 2   24305-27-9, Thyrotropin releasing hormone   33507-63-0,
Substance P   37184-63-7, Inositol monophosphatase   37211-69-1,
2,3-Bisphosphoglycerate mutase   37213-56-2, Factor D   37221-79-7,
Vasoactive intestinal polypeptide   37237-43-7, Galactosyltransferase,
uridine diphosphogalactose-glycoprotein   37255-32-6, Dihydrodiol
dehydrogenase   37255-38-2, GlutarylCoA dehydrogenase   37255-40-6,
Glycine dehydrogenase   37257-19-5, Dihydroxyacetone phosphate
acyltransferase   37270-64-7, AcylCoA thioesterase   37274-61-6,
Isovaleryl CoA dehydrogenase   37277-69-3, Fucosyltransferase 3
37288-40-7, .alpha.-Acetylglucosaminidase   37289-41-1, Sulfamidase
37290-90-7, Methionine synthase   37340-55-9, Uroporphyrinogen III
synthase   39346-44-6, Inter-.alpha.-trypsin inhibitor   39362-14-6,
Prolactin releasing hormone   39379-15-2, Neurotensin   39401-02-0,
Coumarin 7-hydroxylase   39419-81-3, Holocarboxylase synthetase
50936-59-9, Iduronate 2 sulfatase   52906-92-0, Motilin   53230-14-1,
Preprothrombin   53986-32-6, Protoporphyrinogen oxidase   54004-64-7,
Rhodopsin kinase   55354-43-3, Arylsulfatase B   56626-18-7,
Fucosyltransferase   56645-49-9, Cathepsin G   59299-00-2,
N-Acetylgalactosamine-6-sulfate sulfatase   59536-73-1, Phosphomannomutase
59536-74-2, Long chain Acyl CoA dehydrogenase   60320-99-2,
N-Acetylglucosamine-6-sulfatase   60748-73-4, Cathepsin H   61512-21-8,
Thymosin   62213-29-0, Enoyl CoA isomerase   62229-50-9, Epidermal growth
factor   65802-85-9, Prostaglandin D synthase   66796-54-1,
Proopiomelanocortin   67526-96-9, Galactosyltransferase, uridine
diphosphogalactose-acetylgalactosamine 3.beta.-   67763-96-6, Insulin like
growth factor 1   67763-97-7, Insulin like growth factor 2   68651-94-5
70356-40-0, DNA glycosylase   71822-25-8, 5,10-Methylenetetrahydrofolate
reductase (NADPH)   72497-28-0, Cytochrome P 450 8   74812-49-0, Parkin
74870-74-9, UMP synthetase   75922-89-3, Pyrroline-5-carboxylate
synthetase   76901-00-3, Platelet activating factor acetylhydrolase
78689-77-7, 6-Phosphofructo-2-kinase   78849-38-4, Leukin   78990-62-2,
Calpain   79747-53-8, Protein tyrosine phosphatase   79955-99-0, Matrix
metalloproteinase 3   80043-53-4, Gastrin releasing peptide   80295-33-6,
Complement C1q   80295-34-7, Complement C1r   80295-35-8, Complement C1s
80295-38-1, Complement C1 inhibitor   80295-40-5, Complement component C2
80295-41-6, Complement component C3   80295-49-4, Complement C4A
80295-50-7, Complement C4B   80295-53-0, Complement C5   80295-56-3,
Complement C6   80295-57-4, Complement C7   80295-58-5, Complement C8
80295-59-6, Complement C9   80295-65-4, Complement factor H   80619-02-9,
Leukotriene A4 synthase   81604-65-1, Heparin Cofactor II   82249-72-7,
Protein kinase HRI   82707-54-8, Neprilysin   82869-38-3, 2,4-Dienoyl CoA
reductase   86551-03-3, Electron-transferring flavoprotein dehydrogenase
88402-55-5, Prodynorphin   90597-47-0, Peptidylglycine .alpha.-amidating
monooxygenase   90698-32-1, Leukotriene C4 synthase   91448-99-6, Cystatin
C   92769-12-5, Proliferin   93443-35-7, Preproenkephalin   94716-09-3,
Cathepsin K   95567-84-3, Dihydrolipoamide transacylase
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
    (DNA methylation profiles in gene for and disease
      susceptibility   ; detection of variations in DNA methylation
    profile of genes in detg. risk of disease)

IT   96231-41-3, .beta.-Inhibin   97089-82-2, 6-Pyruvoyltetrahydropterin
      synthase   97501-92-3, Chymase   99194-04-4, Cystatin B   99676-46-7,
      Neuroendocrine convertase 1   102577-23-1, Neurokinin B   103106-89-4,
      .alpha.-Inhibin   103370-86-1, Parathyroid hormone related peptide
      106283-10-7, Inositol-1,4,5-trisphosphate kinase   106602-62-4, Islet
      amyloid polypeptide   106956-32-5, Oncostatin M   109489-77-2, Tetranectin
      110910-42-4, Cathepsin E   111694-13-4, Inositol polyphosphate
      1-phosphatase   114051-78-4, LCK tyrosine kinase   114101-80-3, ProMelanin
      concentrating hormone   114949-22-3, Activin   115966-66-0, Histatin 1
      115966-67-1, Histatin 3   117147-70-3, Amphiregulin   119418-04-1, Galanin
      120178-12-3, Telomerase   121797-22-6, Histatin 2   122191-40-6, Caspase 1
      122879-69-0, Endothelin 2   123626-67-5, Endothelin 1   124861-55-8
      125692-40-2, Endothelin 3   125978-95-2, Nitric oxide synthase
      134712-57-5, Oxygenase, steroid 27-mono-   138238-81-0, Endothelin
      converting enzyme   138359-29-2   139466-48-1, Protein C inhibitor
      139639-23-9, Plasminogen activator, Tissue-type   140158-49-2, Hippocampal
      cholinergic neurostimulating peptide   140208-23-7, Plasminogen activator
      inhibitor 1   140208-24-8, Tissue inhibitor of metalloproteinase 1
      140610-48-6, Matrix metalloproteinase 10   141256-52-2, Matrix
      metalloproteinase 7   141349-86-2, Cyclin dependent kinase 2
      141436-78-4, Protein kinase C   141588-27-4, Protein kinase G
      142008-29-5, Cyclic AMP-dependent protein kinase   142243-03-6,
      Plasminogen activator inhibitor 2   142805-58-1, MEK kinase   143375-65-9,
      Cyclin dependent kinase 1   144697-17-6, c-Src tyrosine kinase
      145267-01-2, Matrix metalloproteinase 11   145539-84-0, Exostosin 2
      145809-21-8, Tissue inhibitor of metalloproteinase 3   146480-35-5, Matrix
      metalloproteinase 2   146480-36-6, Matrix metalloproteinase 9
      146702-84-3, MEK kinase   147014-96-8, Cyclin dependent kinase 5
      147014-97-9, Cyclin dependent kinase 4   148047-29-4, Gene TEK protein
      tyrosine kinase   148640-14-6, Protein kinase B   149147-12-6, Bruton's
      tyrosine kinase   150605-49-5, Palmitoylprotein thioesterase
      151662-20-3, DM Kinase   152478-56-3, Janus kinase 1   152478-57-4, Janus
      kinase 2   153190-71-7, Cyclin dependent kinase 3   154531-34-7, Epidermal
      growth factor-like growth factor, heparin-binding   157482-36-5, Janus
      kinase 3   158736-49-3, .beta.-Secretase   161052-08-0, TIE receptor
      tyrosine kinase   161384-17-4, Matrix metalloproteinase 14   169494-85-3,
      Leptin   169592-56-7, Caspase 3   169592-62-5, Cyclin dependent kinase 10
      170347-52-1, Gene Nsk2 protein kinase   172308-17-7, Matrix
      metalloproteinase 15   175449-82-8, Matrix metalloproteinase 13
      179241-78-2, Caspase 8   180189-96-2, Caspase 9   182372-14-1, Caspase 2
      182372-15-2, Caspase 6   182762-08-9, Caspase 4   182938-13-2,
      Cyclin-dependent kinase 9   182970-56-5, Matrix metalloproteinase 16
      185402-46-4, Phytanoyl CoA hydroxylase   186207-03-4, Tissue inhibitor of
      metalloproteinase 4   186270-49-5, Angiopoietin 1   188364-80-9, Matrix
      metalloproteinase 19   189088-85-5, Caspase 10   189258-14-8, Caspase 7
      192465-11-5, Caspase 5   193830-08-9, Growth/differentiation factor 5
      194368-66-6, Angiopoietin 2   202420-40-4, Gene STK11 protein kinase
      203810-08-6, Matrix metalloproteinase 17   205944-50-9, Osteoprotegerin
      207004-87-3, Methionine synthase reductase   213903-53-8, Cryptochrome 1
      216864-07-2, .alpha.-Synuclein   216864-08-3, .beta.-Synuclein
      216864-09-4, .gamma.-Synuclein   216974-70-8, Ephrin B2 receptor kinase
      227604-60-6, Proteinase, matrix metallo-, MT5-MMP   245359-74-4, Orexin
      248259-60-1, Ephrin A8 receptor kinase   252351-68-1, Leukotriene B4
      synthase   252351-86-3, Matrix metalloproteinase 6   252354-25-9, Gene
      STK2 protein kinase   278616-03-8, Peptidase E   303014-92-8, Cyclin
      dependent kinase 6   329736-03-0, Cytochrome P 450 3A4   329764-85-4,
      Cytochrome P 450 1A1   329900-75-6, Prostaglandin endoperoxide synthase 2

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      329978-01-0, Cytochrome P 450 2C9    330196-64-0, Cytochrome P 450 1A2
      330196-93-5, Cytochrome P 450 2E1    330197-29-0, Cyclin-dependent kinase 7
      330207-11-9, Cytochrome P 450 2B6    330207-13-1, Cytochrome P 450 2C8
      330207-52-8, Cytochrome P 450 4B1    330589-90-7, Cytochrome P 450 2C19
      330596-22-0, Cytochrome P 450 1B1    330597-62-1, Cytochrome P 450 2D6
      330824-80-1, Cytochrome P 450 CYP21   331823-27-9, Cytochrome P 450 2A1
      336193-98-7, Exostosin 1   336874-97-6, Cytochrome P 450 3A5
      338454-52-7, .gamma.-Secretase   338455-07-5, .alpha.-Secretase
      338969-62-3, Cytochrome P 450 2A3    344576-15-4, Cytochrome P 450 3A7
      350986-45-7, Cytochrome P 450 2C18   351496-11-2, Cytochrome P 450 4A11
      359643-03-1, Cytochrome P 450 2F1    359868-69-2, Cytochrome P 450 2J2
      360055-02-3, Myotubularin   360069-51-8, Cryptochrome 2   362479-32-1,
      Protein phosphatase 1   403652-37-9, CDK8 kinase   436097-19-7, Cytochrome
      P 450 2A7   440352-47-6, Cytochrome P 450 4F3   440354-11-0, P 450 7A
      440354-98-3, Cytochrome P 450 11A   440355-29-3, Cytochrome P 450 11B2
      440356-60-5, Cytochrome P 450 27B1   440356-80-9, Cytochrome P 450 51
      440363-51-9, P 450 2A13   440363-68-8, P 450 3A3   440363-88-2, P 450 5A1
      440365-05-9, Cytochrome P 450 17   440367-91-9, Cytochrome CYP19
      440368-52-5, Cytochrome CYP24
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
      profile of genes in detg. risk of disease)
  IT   37205-61-1, Proteinase inhibitor
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (I, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
      profile of genes in detg. risk of disease)
  IT   141467-21-2
      RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL
      (Biological study); USES (Uses)
         (II, DNA methylation profiles in gene for and disease
          ***susceptibility***  ; detection of variations in DNA methylation
      profile of genes in detg. risk of disease)
  IT   9031-54-3, Sphingomyelinase
      RL: ANT (Analyte); BSU (Biological study, unclassified); THU (Therapeutic
      use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
         (SEMA4, DNA methylation profiles disease   ***susceptibility***  ;
         detection of variations in DNA methylation profile of genes in detg.
         risk of disease)

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  AN   2008127501  EMBASE   <<LOGINID::20090423>>
  TI    ***DMBT1***   as an archetypal link between infection, inflammation, and
       cancer.
  AU   Mollenhauer, Jan, Dr. (correspondence); End, C.; Renner, M.; Lyer, S.;
       Poustka, A.
  CS   Division of Molecular Genome Analysis, Deutsches Krebsforschungszentrum,
       Im Neuenheimer Feld 280, 69120 Heidelberg, Germany. j.mollenhauer@dkfz.de
  AU   Mollenhauer, Jan, Dr. (correspondence); Lyer, S.
  CS   Department of Molecular Oncology, Institute of Medical Biology, University
       of Southern Denmark, Odense-C, Denmark. j.mollenhauer@dkfz.de
  SO   Inmunologia, (Oct 2007) Vol. 26, No. 4, pp. 193-209.
       Refs: 141
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AB   Epidemiological and molecular studies have pointed to links between infection, inflammation and cancer, which appear to converge at the molecular level in mechanisms associated with innate immunity. Here, the present knowledge about the secreted scavenger receptor cysteine-rich (SRCR) protein Deleted in Malignant   ***Brain***   Tumors 1 (***DMBT1***), also known as glycoprotein-340 or salivary agglutinin, is summarized.   ***DMBT1***   is differentially expressed in various cancer types with most of these displaying a downregulation. As a lumenally secreted protein, it exerts functions in innate pathogen defense and the regulation of inflammation. By contrast, it may trigger epithelial and stem cell differentiation as an extracellular matrix protein. Its broad responsiveness to pathophysiological stimuli points to a general role in cell and tissue protection, which possibly is best circumscribed by linking pathogen defense and regulation of the inflammatory response to regenerative processes. Compelling similarities to the functions of SRCR proteins in primitive metazoa such as sponges and sea urchins exist, which support that its various functions may rely on an ancient and simple principle, i.e. the differential mediation of adhesion and anti-adhesion. Similar to NF-.kappa.B signaling pathways, which are also indirectly regulated by   ***DMBT1*** , the present state of the art indicates that   ***DMBT1***   not only could exert disease- ***preventing*** , but probably also disease-promoting functions. Taken together,   ***DMBT1***   may represent a paradigm for an archetypal link between infection, inflammation, and cancer. Understanding its complex mode of action promises novel insights into the origin and the molecular basis of major human diseases.

TI   ***DMBT1***   as an archetypal link between infection, inflammation, and cancer.

AB   . . . mechanisms associated with innate immunity. Here, the present knowledge about the secreted scavenger receptor cysteine-rich (SRCR) protein Deleted in Malignant   ***Brain***   Tumors 1 (***DMBT1***), also known as glycoprotein-340 or salivary agglutinin, is summarized.   ***DMBT1***   is differentially expressed in various cancer types with most of these displaying a downregulation. As a lumenally secreted protein, it. . . principle, i.e. the differential mediation of adhesion and anti-adhesion. Similar to NF-.kappa.B signaling pathways, which are also indirectly regulated by   ***DMBT1*** , the present state of the art indicates that   ***DMBT1***   not only could exert disease- ***preventing*** , but probably also disease-promoting functions. Taken together,   ***DMBT1***   may represent a paradigm for an archetypal link between infection, inflammation, and cancer. Understanding its complex mode of action promises. . .

CT   Medical Descriptors:
      Actinobacillus
      Actinomyces
      adaptive immunity
      alternative RNA splicing

Bacteroides fragilis
biliary tract infection
cell protection
cellulitis
chromosome rearrangement
dental caries
diarrhea
disease association
down regulation
endocarditis
epithelium
Escherichia coli
evolution
gastritis
gastroenteritis
gene deletion
      genetic susceptibility
genomics
Haemophilus influenzae type a
Helicobacter pylori
Human immunodeficiency virus
infection
inflammation
inflammatory disease
Influenza virus A
innate immunity
Klebsiella oxytoca
Lactobacillus casei
meningitis
molecular biology
Moraxella catarrhalis
mucosal immunity
Neisseria meningitidis
neoplasm
nonhuman
pathogenesis
Peptostreptococcaceae
periodontitis
pharyngitis
pneumonia
Prevotella intermedia
protein expression
protein structure
receptor. . .

L28 ANSWER 21 OF 22 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights
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AN   1999045049 EMBASE   <<LOGINID::20090423>>
TI   Genetic analysis of   ***brain***   tumors.
AU   Tabuchi, K., Dr. (correspondence); Kohata, T.; Fukuyama, K.
CS   Department of Neurosurgery, Saga Medical School, 5-1-1 Nabeshima,
     Saga-shi, Saga 849-8501, Japan.
SO   Japanese Journal of Neurosurgery, (1999) Vol. 8, No. 1, pp. 3-12.
     Refs: 52
     ISSN: 0917-950X CODEN: JJNEE7
CY   Japan
DT   Journal; Conference Article; (Conference paper)

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FS   016      Cancer
     022      Human Genetics
     005      General Pathology and Pathological Anatomy
     008      Neurology and Neurosurgery
LA   Japanese
SL   English; Japanese
ED   Entered STN: 25 Feb 1999
     Last Updated on STN: 25 Feb 1999
AB   It is generally accepted that the accumulation of multiple genetic
     alterations is essential for development of human tumor.  The altered
     genes can be classified into 5 groups according to their function: (1)
     cell growth factor and its receptor genes, (2) cell cycle regulator genes,
     (3) DNA repair genes, (4) genes related to cell invasion and adhesion, (5)
     genes for angiogenesis.  We speculate that at least one out of each group
     of genes is required for the development of glial tumors.  Two different
     kinds of glioblastomas are proposed, that is, the progression type and the
     de novo type.  The former is believed to be associated with p53
     alteration, but the latter is not.  The p53 alteration can cause the cell
     cycle disregulation, failure of DNA repair, impairment of apoptosis
     induction, acceleration of neovascularization and acquisition of drug
     resistance.  Unexpectedly, the de novo type glioblastomas, which are with
     wild type p53, show worse clinical course than the progression type
     glioblastomas.  Regarding the de novo type glioblastomas, certain
     alternative genetic changes other than p 53 alteration may act as more
     adverse factor(s).  Recently, it has been shown that the genetic
     alterations on chromosome 10, such as FGFR2, Mxi-1, PTEN and   ***DMBT1***
     , are frequently seen in glioblastomas.  The authors verified that the
     alteration of FGFR2 was closely associated with unfavorable clinical
     outcome of the patients with glioblastoma.  Thus, genotypic analysis of
       ***brain***   tumors will provide the essential information for selecting
     the modality of   ***treatment***   as well as predicting the prognosis.
TI   Genetic analysis of   ***brain***   tumors.
AB   .  .  .  adverse factor(s).  Recently, it has been shown that the genetic
     alterations on chromosome 10, such as FGFR2, Mxi-1, PTEN and   ***DMBT1***
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     outcome of the patients with glioblastoma.  Thus, genotypic analysis of
       ***brain***   tumors will provide the essential information for selecting
     the modality of   ***treatment***   as well as predicting the prognosis.
CT   Medical Descriptors:
     angiogenesis
         ****brain tumor: ET, etiology***
     conference paper
     DNA repair
     glioblastoma: ET, etiology
     glioma: ET, etiology
     human
     human cell
     neovascularization (pathology)
     prognosis
     tumor suppressor gene
     *protein p53


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     STN
AN   2003:882324  SCISEARCH <<LOGINID::20090423>>
GA   The Genuine Article (R) Number: 730KV
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AB   Purpose: In a study of 208 meningiomas, we found a high incidence of
      loss of heterozygosity (LOH) on chromosome 10 in benign (73.4%), atypical
      (80.0%), and malignant (86.7%) tumors. A large percentage of the benign
      and atypical tumors and an increasing percentage of malignant tumors had
      LOH on multiple loci (43.9%, 45%, and 66.7%, respectively). The high
      incidence of LOH occurring early in meningioma progression suggests that
      LOH at individual alleles may serve as a marker of clinically relevant
      alterations useful for patient diagnosis, the subclassification of tumors,
      and/or the   ***treatment***   of patients.
         Experimental Design: To test this, we examined 208 sporadic and
      recurrent meningiomas of all grades for correlations between LOH at 11
      markers on chromosome 10 and tumor location, histology, and grade and
      patient race, gender, age, recurrence, and survival.
         Results: Several significant correlations were found. The data
      indicate that genetic differences occur not only between tumors of
      different grade, but also between tumors of the same grade, and therefore
      may be useful to define genetic subsets with clinical implications. LOH
      at D10S179 (P = 0.001) or D10S169 (P = 0.004) is most likely present in
      higher-grade meningiomas and, when present in benign tumors, may signify
      sampling error or a morphologically benign but biologically aggressive
      tumor. Furthermore, LOH at D10S209 (P = 0.06) and D10S169 (P = 0.01) may
      predict shorter survival and/or higher rates of recurrence, respectively,
      in tumors with benign or malignant histology.
         Conclusions: We conclude that these chromosome 10 markers deserve
      further testing as unfavorable prognostic indicators for meningioma
      patients.
AB   . . . alleles may serve as a marker of clinically relevant
      alterations useful for patient diagnosis, the subclassification of tumors,
      and/or the   ***treatment***   of patients.
         Experimental Design: To test this, we examined 208 sporadic and
      recurrent meningiomas of all grades for correlations between. . .
STP   KeyWords Plus (R): NERVOUS-SYSTEM; ALLELIC LOSSES; GENETIC MODEL;
         BRAIN -TUMORS; PROGRESSION;   ***DMBT1***

An alternative to view hit terms when display exceeds KWIC
processing limits is to use HIT display format.